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A MONTHLY JOURNAL

OF

POPULAR MEDICINE;

EXPLAINING

THE NATURE, CAUSES AND PREVENTION OF DISEASES
THE IMMEDIATE MANAGEMENT OF ACCIDENTS,
AND THE MEANS OF

PRESERVING HEALTH.

CONDUCTED BY

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A JOURNAL

OF

POPULAR MEDICINE.

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Art. I. *Introductory Essay.*

THE abundance of existing works on popular medicine proves that the world sanctions such publications. Indeed, it is rare to find a person who does not possess some treatise on domestic medicine, or does not eagerly read, when he meets with them, even the regular medical journals of the day.

Medical men, however, have always objected to the publication of books on domestic medicine; and in some degree their objections are valid. But, as it is easy to show, that much medical knowledge is possessed by unprofessional persons, and that much must be possessed by them necessarily, it is clear, that by objecting to the promulgation of such knowledge, we only attempt to oppose the inevitable march of necessity; and therefore that whilst books on popular medicine are condemned, it is not, nor can it be, because they are improper, as books written on such a subject, but because they are written on an improper plan.

In fact, genuine medical information is spreading very fast amongst the public at large. A death-blow has been given to the mystery of physic; and whilst every one now knows, that medicine is, like all other things, resolvable into a plain matter of common sense, it is beginning to be seen, that its general principles are to be comprehended by any one whose mind has received a moderate share of cultivation.

As an illustration of these facts, it is only necessary to advert to the rational improvements which are now so generally adopted in the domestic management of children. Even the almost inveterate system of cramming children is falling before the increasing knowledge of the world on medical subjects.

Though this is the case, an attempt to teach the world how to distinguish and cure diseases would not only be futile but highly dangerous; and therefore, we, as well as the rest of our professional brethren, think, that many of the books on popular medicine have done much harm. For what can be more absurd than to suppose, that an indifferent person can be taught, by vain descriptions in a book, what the best talents incessantly exerted during a long life, aye, and after being matured by the most liberal education, have failed to perform. The best physician is indeed but an ignorant man, if compared with one, if there could be such a one, to whom the multifarious forms of disease are really familiar: and therefore whilst no such man as the latter does, or can exist, and whilst we deplore that the labours and experience of ages have left us only as insufficiently informed on medical subjects, as we are, we can at once perceive, that it is in vain for the public to expect that they will ever dive deep enough into the mysteries of practice, to distinguish the numberless varieties of disease from one another and treat them successfully.

But though this is impossible, and therefore though the plan on which popular books on medicine have been generally written is an improper one, yet there is much respecting medicine, which unprofessional persons do know, and much more that they ought to know. For, though they cannot know and cure diseases as well educated medical men can do, they can easily be taught how to ward them off, and prevent their formation. The forms of disease are complicated, and very various; the springs of disorder are few, and very easy to be recognized; and we feel pride in saying, that in our own immediate connexion, the health of our friends, and especially of their children, has been better preserved by our anxious endeavours to point out the paths which lead to health, as also the devious bye-ways, which, with equal certainty, lead to disease, than by exerting ourselves, however successfully, to cure diseases when present. It is needless to add, that our satisfaction, in seeing disorders thus avoided, has much more than counter-balanced any profit that might have accrued, from witnessing the distressful and often fatal scenes, which too frequently result, only from the want of such elementary knowledge as we have alluded to.

Nor has the promulgation of such knowledge been less gratifying in another point of view. When disease has arrived, and come it must, the power of curing it has been materially increased, by the efficient manner in which it has enabled the patient or his friends to co-operate with the medical attendant in his endeavours. For when the notions of the latter respecting the disease have been explained as intelligibly as the case admits of, the mode of treatment has appeared to arise so rationally out of the explanation, that the necessary directions have been certainly and promptly acted on. Confidence also has been kept up; and thus, whilst the needless alarms, which, so generally accompany a profound ignorance of the patient's real state, are prevented, the case goes on satisfactorily to all parties: or at least, a much better chance of recovery is given to the patient, than where, as in other instances, his friends give food where the practitioner has requested that none may be given, and otherwise neglect or oppose his suggestions, on the false and often destructive idea, that weakness in a patient is always indicative of that species of debility, which is to be cured by the exhibition of tonic medicines and a nourishing diet.

As a further illustration of these points, let us look at the matter thus:

The friends of a patient say, "This is all very well,—the doctor said, that low diet was absolutely necessary for his recovery; but I knew he was wrong, and I gave him some meat and wine, and you see he has got well."—The error lies here; the disease was one which was conquered by the powers of the constitution, or by the treatment, *in spite of these improprieties of management.*

Every patient thinks that his disease is an important one; but, if a medical man's practice consisted entirely of cases of life and death, as they are called, the profession would be but scantily supplied with professors; and it may be added, that the success of the best of us would not wear a very promising aspect, if the recovery of our patients depended in every case, on the clearness of our conceptions respecting the disease, and the critical propriety of our treatment: not to mention, that the kind of ignorance, the existence of which we have deplored in attendants, would probably in most cases, so effectually assist the practitioner's inevitable hesitation respecting the true nature of the disease, that very few patients would be saved.

But, not to carry this discussion further at present, enough has surely been said to show, that unprofessional persons should possess some knowledge of medicine; and, therefore, that if the common books on popular medicine be injurious, it is not because the object of their publication is a bad one, but because the plan adopted is improper, and the kind of information attempted to be taught is such, as never can be learned unless by a course of regular medical study. Indeed, the attempt to teach it has only led to more error and confusion than existed before.

It may now be said, for it is true, that the conviction which has arisen out of these considerations, has suggested the present publication. It is by no means intended to teach indifferent persons how to distinguish, and to cure diseases, (and that however not from any disinclination, or feeling, that it were wrong so to do, if it were possible) but to lay before the public, in familiar language, as much of the principles of medical science as may enable them

1st. To understand and recognize the state of health when present;

2nd. To know the mode in which disorder of the healthy functions is produced, and consequently, the principles which lead to a rational system of diet, exercise, and clothing;

3d. To distinguish between the state of health and that of disease, and therefore to mark the approach of coming diseases;

4th. To become alive to the important truth, of how simple the remedial means are, which will remove a commencing disease, and lead a complaining patient back again to health; and lastly, when disease is actually present, to learn how they may understand the explanations given by their medical friend; and thus co-operate with him for the good of his patient, instead of counteracting his endeavours, by either not understanding his directions, or doubting their propriety.

There are many other collateral subjects, which will form an interesting part of such a publication. Amongst these we may enumerate, the general directions to be followed, before a practitioner arrives in cases of accidents of every kind, such as drowning, poisoning, broken bones, burns, &c.; discussions on diet, exercise, clothing, and the general doctrines of the mode of preserving health; the physical treatment of children in particular; and, as the health of children is so materially dependent on their moral education being properly conducted, an occasional glance at that branch of the subject; the wandering occasionally amongst the beauties of the creation, in discussing some parts of the collateral branches of medicine, such as botany, natural history, chemistry, and mineralogy; and, above all, the advantage as well as pleasure, which must arise to all, from having their legitimate objects of study increased, by a knowledge, however small, of the boundless wonders of the human body in its construction and actions.

Surely these are proper subjects for discussion with the public; surely the teaching of any, the smallest part of the knowledge here hinted at, must be praiseworthy; for surely the possession of it to any great degree, would not only lead to an extension of the ordinary lives of men, but make their existence here more agreeable both to themselves and to their friends. For these reasons therefore, we have attempted the present work: and though it may fail in the execution, yet the intention will be duly estimated, and the desire to be useful will be allowed to the writer; even, although it may be felt, that his endeavours have not been crowned with all the success which he hoped would result from them.

ART. 2. *Observations on Colds.*

How common it is to hear a person say he has got a cold! No doubt he thinks he knows what he means when he uses these words; and yet, on examination, it will be found, that they convey no further meaning to his mind, than that he is affected by that kind of fever which is called a cold. Certainly he will tell you it is a cold in his head, or on his lungs, or in his throat; and he will be probably right: but he cannot tell you in what the disorder consists, nor why it is in the head, lungs, or throat.

All this, however, may be learned and very usefully too; for as neglected colds frequently lead to destructive complaints, or rather, are misunderstood, they being in reality not colds, but the dangerous complaints in question, it must be very useful for every one to know, with something like certainty, when his cold is a dangerous one, and when it is one of that common kind which occurs every day, and is cured by a day or two's abstinence, a dose of medicine, and staying within doors.

A cold then is a fever—a regular fever—as much a fever as typhus is, though not so dangerous. It is caught usually by an improper exposure of the body to the common causes of fever, at a time when the actions of the constitution are from accident, or from disorder, in a susceptible or weakened state. A cold fit is produced as in other fevers; a hot fit follows, and the complaint runs through its stages like any other fever. But it will be said, whence àrises the stuffing of the head, the sneezing, the watering eyes, the sore throat, the loss of voice, the rattling breathing, the collection of phlegm, the cough, or the pain in the chest? Why, it is thus—the nose, the back of the throat, the windpipe, and the air tubes of the lungs, are all lined by one continuous membrane; which, because it is covered by mucus, to defend its delicate surface from injury by extraneous substances, is called a mucous membrane. Now, there is an extraordinary sympathetic connexion, as it is called, between the actions of the skin and the actions of this membrane; and it is found by experience, that when a cold is taken, the actions of the skin are first interfered with; then a sympathetic affection of some portion of this mucous membrane takes place; inflammation follows, and thus the whole is accounted for.

If the portion of membrane which lines the nose be affected, the complaint is a sneezing cold; and as there are certain cavities connected with the nose, and lined by the same mucous membrane, called sinusses, pain is felt also in the region of these sinusses; hence the heaviness over the eyes, the frontal sinus being situated over the eye-brow, &c. Or, if the throat be affected, then the complaint is called a sore throat. Or, if the membrane which lines the larynx, or organ of voice, which is situated at the entrance from the throat into the windpipe, and forms the projection in the middle of the neck, then the voice is lost. Or, if the inflammation attack the membrane which lines the windpipe, or the air tubes (bronchial tubes as they are called) which lead from it, then cough takes place, and the rattling of phlegm is heard when the person breathes.

It is easy to understand all this: and it will now be equally easy to see, that the danger of the complaint varies much, according as it is situated in one part of this mucous membrane, or in another. So, a sneezing cold is not dangerous; a sore throat is not dangerous; hoarseness and loss of voice, however show more danger; as do also the signs that the bronchial membrane is inflamed. This arises from the two latter parts being much more essential to life than the two former.

But, it will be said, that colds with cough and loss of voice, are not always dangerous. Certainly not; but this depends solely on the violence of the inflammation. Let such complaints be neglected, or let the inflammation be once firmly established, and they become very dangerous disorders.

Moreover, even in catarrh and sore throat, the irritation which produces the symptoms, may very easily slip along the mucous membrane into the larynx, and down the windpipe into the lungs; and thus give rise to danger. In fact, this generally takes place in some degree; for cough and spitting, if not hoarseness, commonly occur in the progress of such complaints; but here, as in the other case, if the inflammation be not violent, no harm arises. However, sometimes the reverse takes place. A gentleman had a sore throat, attended by a little tickling cough, with some disposition to hoarseness. His fever ran high; and therefore he was directed to inform his medical attendant, if the cough increased. It did increase, and became incessant. In fact, the inflammation had spread to the larynx; and thus, a very unimportant fever was changed, at once, into one of imminent hazard. But, as the probability of this had been foreseen, immediate relief was given, and the danger was speedily averted. Had this gentleman gone on for some hours longer, which he would have probably done, if not apprised of the circumstance, he would almost certainly have died; and indeed many persons are thus suddenly cut off by what are called colds, to the great surprise of their friends, and often even of their medical attendants.

It is always right therefore, to take care of a cold. But so long as the symptoms are moderate, the fever not high, the cough not troublesome, and the whole constitution free from any great oppression, no danger is to be apprehended. In such cases, attention to the bowels, *taking great care to keep the skin warm* by staying in the house, warm clothing, &c.; the warm bath, if possible, or putting the feet into warm water, and abstinence, will be all the treatment that is required. But if the reverse of these symptoms should occur; if the cough be very troublesome, if the breathing be difficult, the fever high, and the powers of the constitution be much oppressed, then the case puts on a serious aspect, and requires immediate attention.

Pain in the side and chest often occurs in colds; and especially in those which take place during the dry winds of spring; and it is for this reason, that the present article is written at this time. It arises thus. As we have said above, the inside of the lungs is lined by a mucous membrane; now the outside of the lungs is covered by another membrane, called the pleura, which, by preventing the lungs from adhering to the inside of the ribs, allows them to have the necessary play during respiration. This membrane from being smooth, and covered merely by a slippery limpid fluid, is called a serous membrane.

In cold and damp weather, it would seem, that the mucous membranes are the most commonly affected, when the patient takes cold; in cold and dry weather, on the contrary, the serous membranes are affected the oftenest. It will now be understood, that whenever a pain or stitch in the side or chest takes place in a cold, and this at any season of the year, especially if there is also much difficulty of breathing, it may be apprehended, that inflammation of the pleura or of the substance of the lungs has taken place, and this complaint is a very dangerous one.

With such directions as these, it is hoped, that an indifferent person may know what colds he may safely treat himself, and what he ought to lose no time in submitting to more experienced care.

In the next number a few remarks will be made on other consequences of neglecting colds, besides those above-mentioned.

ART. 3 *Observations on the Health of Children; principally intended to point out how Disorder first, and then Disease steals on their Constitutions, and therefore how the Causes of Ill Health may be averted*

THE following observations on the signs of health and disease in children, form the first portion of a connected series of remarks on the health of children, and on their diseases.

The proper management of children is confessedly of the first importance. "Train up a child in the way it is to go, and it will not depart therefrom," is as true in the physical history of the human species as it is in a moral point of view. The health of the child, as a general principle, may be said to form the health of the man; for the exceptions to this observation are so few, and so many even of those are only apparent exceptions, that the observation is unquestionably true in the great majority of instances.

On this account, the care of the health of children has ever been an object of the author's most anxious but agreeable solicitude; and therefore, whilst he thinks he has verified the following observations, by reiterated and unvarying experience, he hopes that there may be found in them something that is useful; although probably he only flatters himself, when he believes that they contain any new views of the subject.

The general plan which has been followed in these observations is as follows.

The signs of health and disease in children are first pointed out; the subject of early moral management is then discussed, from a conviction that the good or bad health of children is much influenced by the early moral habits which they have learned; then follows a general account of how disorder arises in a child's constitution, thus leading to a discussion on the causes of diseases being more prevalent amongst the children of the poor than amongst those of the rich; and to a statement of the difference which exists between the diseases of children as they belong to one or other of these classes: the whole suggesting, it is hoped, the best plan for avoiding the causes of disorder in all classes of children when practicable, and for observing and remedying diseases in their incipient state; which, as they may be easily recognized are generally capable of being removed by very simple means.

ESSAY THE FIRST.

On the Signs of Health and Disease in Children.

It is an error to suppose, that a great mystery hangs over the diseases of children. We are taught, that it is difficult to recognize disease in children, because they cannot point out, in words, the seat of their complaints; but the observation is not a sound one. Children speak a much more plain language by their actions than adults do by their words. But this is not all; there are other circumstances, peculiar to children, which greatly facilitate the investigation of their diseases. An infant instantly and decidedly gives expression to the pain which he feels; an adult is so accustomed to bear pain, that unless the irritation, which is present in his constitution, produces well marked symptoms, he disregards his feelings; and thus diseases run on, until complicated, or even irreparable mischief is often the result.

An infant's diseases too, are simple; for his constitution is sound; whilst the complaints of adults are generally more or less complex, on account of the weak parts, which Celsus says, with the best observers, are to be found in every person's constitution. Moreover, an infant has no guile; its actions tell right on what it feels; for it is regardless of consequences; whilst an adult is often led to conceal a part of his complaint and be deceitful.

Many more circumstances might be adduced to show, that it is at least as practicable to discover the complaints of children as those of adults; but as these facts will naturally offer themselves for consideration in many other parts of these pages, it will not be necessary to enlarge further upon them here.

Ask an attentive mother whether she finds any difficulty in deciding when her child is ill: "Oh no," she will say, "his temper, his complexion, his every look shows it, even when the cause of illness is slight:"—and it is very true. The constitutions of children are highly susceptible of impressions, and the younger a child is, the more readily will his system be affected by the irritations which produce disease.

Let a child's bowels be disordered for the first time, and he will become paler than usual; heat perhaps will follow; his tongue will be white; he will be heavy, and his temper will be changed for the worse. These are circumstances not to be overlooked, if even common attention be paid to a child's actions.

Let his bowels be habitually deranged, and the increase of symptoms will keep pace with the increase of irritation: the skin will be constantly paler and of a dirty hue; the eye will be sunken, and surrounded by a dark line; the breath will have an unpleasant smell; the tongue will be white and dry; fever will occur at intervals; the child will become emaciated, and his nights will be restless and his days fretful.

If a child be affected by symptoms like these, it will be apparent that some irritating cause is acting on his system; and by a little closer attention, the part on which that cause is producing its effect, may in general, be decided on with sufficient accuracy.

His stomach will be found to be more projecting than it ought to be, his evacuations will be unnatural; and further enquiry will generally show, that an improper diet has occasioned the illness in the first instance, and is still active in aggravating the existing symptoms.

The intensity of these deranged actions will mark, to a practised eye, the degree of the irritation; and the treatment necessarily grows out of a clear conception, first, of the degree of the illness, and secondly, of the part on which the irritation is acting with the greatest violence.

But it will be necessary now to revert to the first periods of infancy, and it will become apparent, how disorders arise from very slight and simple causes; how this disorder is aggravated, and leads slowly but certainly to the most dangerous diseases of children; how easily its very first and slightest symptoms may be detected, and it is hoped, how readily it may, in the majority of cases be cured, and the consequent train of evils be averted.

And here too, the simplicity of character, which marks the diseases of children will appear very plainly.

Little indeed can be learned from the appearance of a child during the first few weeks of its existence. Its complexion is not settled; neither is the round form of its limbs established: but, then infants of that age are so seldom ill, except under very defective management, that this becomes of little importance.

After some time, however, the child improves;

its limbs take on the rounded form, and its whole appearance announces that it is happy and in health. It sleeps soundly and almost constantly, and with its eyes lighty and accurately closed; it seldom cries; its limbs and body are convex, and become firm; it is not too fat, neither is it lean; its gestures are easy; its hands are very seldom raised above the mouth; it does not start nor smile in its sleep; its eyes are moderately bright; its skin is not wrinkled; its respiration is nearly imperceptible; its secretions are natural; its bowels are moved two or three times in the day, the excretion having the appearance of custard, and being discharged slowly as through a syringe; it has a vacant look of content; and lastly, it is easily pleased by the attentions which are bestowed on it. Symptoms like these sufficiently show that a child's sensations are agreeable, and the actions of its system going on in a healthy manner.

Any deviation from this state is a prelude to disease. Moral treatment, however, has some influence on the infant, even at this early period of existence. Infants under some nurses will lie down quietly when awake, and go to sleep without further interference; whilst under other nurses the same infants would probably require rocking, or at least would cry, if it were attempted to lay them down awake.

This crying is not from disease, and may be easily distinguished from that which is. Infants cry too on being washed, but, even here, much may be done to prevent it by proper management; as may be seen very frequently, where children are attended by mothers or by observing nurses.

The cry of disease is very different from all this; and is moreover accompanied by other symptoms of illness, which are in general sufficiently unequivocal.

It is not necessary to give the reverse of the signs of health alluded to above, and say, this is disease; but it is of more importance to press on the reader, that any deviation from these signs should be strictly attended to, and that the welfare of children, both mental and bodily, mainly depends on that anxious and constant attention to their wants and feelings, which nothing but affection can give; and which therefore can seldom be found except in the breast of a mother. When mothers, indeed do attend to their children with the same perseverance as the parents of the brute tribes watch over their young, it will behove the medical man to come to the charge of a child's health with a skilful eye, and a well-stored mind: for the constant concentration of a mother's powers of observation on her child's actions, will often point out to her that disorder is present, long before it is perceived by him; or in more severe cases, he will probably lose her confidence, by over-looking symptoms which are but too apparent to her. An instance of this kind occurred the other day. An only daughter was affected by the hooping-cough. She went on well for sometime; but at last, the mother said she was ill. The medical attendant, a man of experience and observation, could not perceive it; but having a high opinion of the mother's powers of observation, he saw the child every day, and sedulously attended to its symptoms; but in vain—he could not perceive that any bad symptoms were present. After the lapse of about a fortnight, however, decided indications of hydrocephalus occurred, and the child died in two days from that time. This practitioner blamed himself, and with good reason, for his want of discrimination in this case; as the slight symptoms which preceded the fatal attack, and which probably precede the attack of almost all diseases, had undoubtedly existed from the time of the mother's fears being first excited; and he could not but feel, that she had seen what he had omitted to observe.

A medical friend of the author's relates that he once witnessed a similar mistake. A lady said that her child was threatened with water in the head; the medical man overlooked it; but, as in the former case, the mother founded her opinion, on an observance of some small deviations from healthy action, which hourly attention had enabled her to perceive; and she was right. She said, that the child was fretful and yet so sleepy.

From these two symptoms she deduced that the impending disease was hydrocephalus; and it was a most acute observation; for, as Dr. Armstrong says, nothing marks the threatening of hydrocephalus more than a combination of fretfulness and heaviness.

No deviation from the signs of health in children should, as is said above, be allowed to pass unnoticed. Even an infant, does nothing without a reason, or rather without a cause: if he cry, it is either because he is irritated, or because he is ill; if he move his limbs or open his eyes, it is to make observations, or to obey some internal impulse, which is supplied by the wants of the body; and, therefore, if his actions express pain, or such a degree of increased irritation as may be considered to be leading on towards disease, the warning should not be unattended to; for infants, as has been hinted above, invariably tell the truth.*

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* Infants may, as a friend remarks, but children do not; indeed, as he says, they often lie most abominably; concealing their pains, and saying they are well, when they are evidently ill, only because they dislike physic. But at present, infancy, and not childhood, is the subject for discussion.

It is hoped that enough has been said to shew how interesting it is to observe the actions of children even during the early period of infancy. Infants, however, are equally interesting in a moral point of view; and as in the course of these essays an explanation will be offered of the great influence which a proper moral treatment of children has in preserving their health, a few remarks on the early education of infants will form the subject of the next essay.

ART. 4. *On the Measles.*

THE measles were exceedingly prevalent during the open weather of last autumn; and, on the whole, the disease put on a violent character.

Every body is acquainted with the appearance of the measles; therefore, no general description of symptoms is required here; but there is still much information respecting this disease, which may be very advantageously given.

It may perhaps be as well to remark, that parents often take alarm when their children are affected by slight eruptions; and especially when those eruptions occur on the body, on the supposition that it is measles. Now, the eruption of measles does not usually show itself first on the body; it is more commonly to be found on the thin skin behind the ears, and just below them on the neck, and also round the child's mouth. Whenever, therefore, a *speckled* state of the skin occurs in those parts, if cough, sneezing, watering eyes, and a swollen appearance of the features, and other symptoms of catarrh be also present, the measles may be anticipated; but not if these parts be unaffected; and especially not, if the eruption have the character of pimples. The eruption of measles never shows a head; it is very slightly raised from the skin, and is not, like pimples, &c. of a round form; but its appearance is that of irregular red spots.

In the generality of cases the measles is not attended by danger; at least moderate care will carry most children safely through the disease. In many cases, however, it is a very dangerous disorder. Healthy children, in the higher and middle ranks of life, very seldom die of the measles; but, when it attacks the miserable and emaciated infants of the poor, scarcely any disease is more destructive. During the seventeen first years of the author's connection with medical practice, he does not recollect that he saw one child die of the measles; so that he almost began to think, that such an event could not happen, except through negligence. Since his residence in London, however, he witnessed a series of sixty cases, which occurred in a parochial infirmary during the autumnal months; and he soon found that he still had much to learn respecting the danger of measles.

The children were chiefly infants; and having been badly nursed, fed and clothed, for they were the children of the poorest persons, the majority of them were, as may be expected, very unhealthy. The effect of this was but too soon apparent; for in almost all of them the disease was severe, and a large proportion of the whole died; perhaps, one in four or five; although they were attended with the most scrupulous care, and by one whose knowledge of the eruptive fevers of children is not exceeded by that of any other English practitioner. It was so invariable that the most unhealthy and emaciated children had the disease with the greatest severity, that on going round the nursery, it was easy to point out which children would die if they caught the disease; and the result very seldom negatived the prognostic.

The danger of measles however does not arise from the disease itself abstractedly considered. The eruption may be very abundant, and yet the child be safe; the fever may be violent and yet there may be no danger; so also may be the cough, the watering eyes, the sneezing and the state of general oppression. But, as is attempted to be explained in an article given above, the sympathy which exists between the mucous membrane of the throat and of the lungs, and the skin is so strong, that the eruption on the latter, produces a consentaneous increase of action in the former. Thus the danger of measles depends on the degree of a secondary inflammation, which is found to occur in the mucous membrane which lines either the larynx, the windpipe, or the bronchia, (the air tubes) or all of them.

It is difficult to explain why this secondary inflammation should occur more frequently in unhealthy then in healthy children; but that the fact is so is certain. For, not to mention, that the extensive experience of several eminent men agree in this point, it was found to be invariably true in the numerous cases which are alluded to above.

Not one child got into danger except from inflammation of the larynx, or of the bronchia; not one died, in which this inflammation was not the cause of death. This was abundantly proved by dissection; for in all of them, the larynx was found to be highly inflamed, or was ulcerated, and the bronchial tubes were plugged up by mucus and by pus. The lungs also were generally inflamed, and the neighbouring glands enlarged.

It was remarkable too, that, in the most dangerous cases, the eruption on the skin was scanty, or almost imperceptible; indeed, in two of the fatal cases the eruption never appeared on the skin; and this will explain the popular and true opinion, that a full crop of eruption in measles is a favourable circumstance.

In a great majority of these bad cases, this inflammation came on with the first fever at the breaking out of the eruption; and it invariably lessened the quantity of the eruption. The skin was pale and cool, instead of being hot and flushed; and though the cough and difficulty of breathing showed the mischief which was going on within, the external signs of fever were only present in a very moderate degree.

The warm bath, bleeding, both by the arm and by leeches, confinement in bed, emetics, and ipecacuanha in nauseating doses formed the most efficacious treatment; and whilst none died except of inflammation, which from the debilitated state of the little patients was uncontroulable; all those who recovered from the bad symptoms, were cured by evacuants, pushed as far as the constitution could bear.

In the ordinary cases, confinement to bed, an emetic, and a purgative; and afterwards ipecacualma, and mild laxatives formed the only necessary treatment.

Thus then, it seems, that the measles are to be dreaded, in weakly and unhealthy children, at least, in London. In such children, the dangerous inflammation will generally come on at the commencement of the disease; in many however, and even in healthy children, the decline of the disease forms a period at which the patient requires to be attentively watched. At that time inflammation of the mucous membrane, or of the lungs is very likely to occur, and it always requires very prompt measures.

Whenever therefore, at the decline of the eruption of measles, a child has his cough much increased, his breathing much quickened, and especially if he complain of pain in his chest, either on breathing or on coughing, let it be attended to, for pneumonia in some form or other is present.

Although, in the majority of cases, children ill of the measles should be placed under the skilful care of a medical man, yet there are many things in the treatment of measles, which may be advantageously attended to by the friends of a patient. The medical practitioner will, of course, moderate the fever which precedes the eruption by bleeding, if the degree of fever, &c. make it necessary, by an emetic, by purging, by abstinence, and by the warm bath; but the attendants may at the same time see, that, during the period of the eruption, the patient is kept strictly in bed, so that cold air is by no means permitted to blow on his body; for it is found that one most efficacious way of preventing an accumulation of blood in the internal parts, is to keep up the circulation on the skin, by external warmth, and by favouring the continuance of perspiration. Infants, however, will not often be prevailed on to lie in bed; with them therefore a blanket may be doubled up like a shawl, and it may be thus worn, tapes being placed so as to tie it on round the child's neck. In this way the hands and chest as well as the whole body may be kept permanently covered, even when the child lies on the knee; and the same thing may be done when a child cannot be prevented from sitting up in bed.

Of course it is not meant to recommend a heated atmosphere and too much covering in measles. *Moderate warmth* is the thing required; especially as this will assuredly prevent the application of external cold to the skin.

If this be persevered in strictly, during the stage of eruption; if also, warm diluents be given liberally, *and no other food* be allowed during the same period, then it is probable that inflammatory symptoms will not appear at the decline of the eruption, and that the patient will then be convalescent.

When the eruption has fairly declined, the warm bath will be found to be very useful; especially if the skin be well washed with soap, so as to clean off all the perspiration and other unpleasant secretions which will have collected there. The temperature of the water should be 96° or 97° of Fahrenheit's scale, and the only necessary precaution is, to do it in a warm room, and with a sufficient screen to prevent a draught of air from blowing on the skin.

As a general rule perhaps, the warm bath should be thus used at the time the patient's linen is first changed; and this should be immediately after the fever and eruption have in any material degree subsided.

It is usual to purge children repeatedly after the measles. As a general rule, this may be good; because it will very probably take away any slight and unobserved increased action in some part of the respiratory organs, or the mucous membrane, which, it will now be understood, may not improbably be left after the disease has subsided: and also it may tend to obviate the evil effects of the too great desire which always exists to feed patients after acute diseases, on the plea of recruiting their weakened powers. But, it is not necessary to *purge* them, unless symptoms of deranged health be absolutely present, such as cough, or sore eyes, or foul tongue; and though in strong children an occasional dose of medicine can do no harm, yet in weakly children the gentlest laxatives only should be administered.

One point more remains. It is usual to feed patients in convalescence after acute disease. Now this is a bad practice; doubtless a certain quantity of food is required, and that should be of a nutritious quality; but it should be recollected, that the powers, in such cases, have been weakened by the previous disease, and that therefore only the lightest and most digestible food is applicable. Even food of this kind should be given in much smaller quantity then the sharpened appetite would appear to demand: and with regard to measles, after which, slight inflammations of certain parts so often remain, it will often be necessary to deny any portion of nutritious food as long as cough, or inflamed eyes, or a foul tongue be present; for all these irritations are produced either by actual inflammation, or verge closely on it; and, they are always to be cured by such means as cure inflammation generally.*

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* One exception to this rule may be mentioned. It occasionally happens, especially in large towns, that a state of deranged health will follow the measles and other eruptive diseases, which differs from inflammation; although the case would be mistaken by an inexperienced observer. On a general view, the child appears to be inflamed; his eyes water and are red, and his skin is hot; but the eye-lids are swelled and broken out, an eruption also commonly appears behind the ears, the upper lip too is tumefied, and the skin surrounding the mouth is chopped and covered by pimples. Bark and a nutritious diet cures this form of disease.

Miscellaneous Department.

This portion of our Journal will consist of Critical Analyses of New Publications, and a Digest of such parts of the Medical and Scientific Literature of the Day, as may either afford interesting information to our Readers, or allow room for useful remarks on our own part.

Art. 5. *The Cholera Morbus of India.*

Dr. Kinnis, of the 56th regiment, gives us, in the Edinb. Med. and Surg. Journal, No. 66, an account of the late severe Indian epidemic, as it appeared at the Mauritius.

We mention it merely for the purpose of saying, that this tremendous disease, which so lately ravaged the East Indies, spreading like a pestilence, and cutting off the victims of its direful violence, frequently within a few hours after the first symptom of disorder, was a true cholera morbus. This disease is nearly allied to the autumnal bowel complaints of this country; the only difference being, that in India, the heat of the climate and other causes, gave it the character of a malady too often of uncontroulable malignity, and in scarcely any case, to be suppressed, except by bleeding and other modes of treatment proper in diseases of inflammation. The disease, in truth, was one of inflammation; and the extensive experience which has resulted from its occurrence, has at once verified the views medical men have lately taken of the inflammatory nature of these disorders, and has opened the eyes of English practitioners to the fact, that our common bowel-complaints are frequently inflammatory, and always connected with an overloaded state of the liver, or of other parts of the intestinal apparatus, which requires attention in the treatment.

In India, bleeding, joined to opening medicine and opium, cured the disease. In this country, the bowel-complaints are cured, the most readily, by opening medicine and opium in conjunction, or by these medicines in succession, and by bleeding when these remedies are ineffectual. This, at least, is the case in by far the majority of cases.

ART. 6. Dr. ABERCROMBIE, a rising practitioner of Edinburgh, in addition to his late researches into the pathology of diseases of the head and the abdomen, has now written an interesting account of CONSUMPTION, and of the diseases which are confounded with it.

Consumption was treated by tonic remedies from the time of Hippocrates to the seventeenth century: the favourite remedies being nourishing diet, friction, cold bath, exercise, sea voyages, preparations of iron, and astringent or stimulating remedies. Sea voyages formed perhaps the most approved prescription.

In the eighteenth century, a totally opposite plan of cure was recommended, and antiphlogistics became the favourite remedies. Sea voyages were still used indeed, but with the new explanation of their operation, that they lowered by keeping up nausea. A few physicians, however, still recommended the tonic treatment; and thus opinions went on, until the introduction of digitalis gave them a new direction. It, also, has sunk into disrepute.

We agree with Dr. A. in believing, that whilst certain cases have been occasionally cured by all these methods, it is impossible that the cases can have been all of the same kind, although all ranged under the title of consumption; and therefore, that many diseases of different characters, and of greater or less capability of being cured, have been called consumption. The fact is certainly so; and Dr. A. goes on to mention and describe several forms of chest complaint, which, though commonly called consumption, are very dissimilar to it in their character and dangerous tendency.

The French also have done much in discriminating between these various forms of pulmonary diseases; and it is indeed often a matter of anxious investigation, to determine between true consumption and a curable disease. We need not say, that Dr. A's paper is very valuable. (Edinb. Med. Surg. Journ. No. 66.)

ART. 7. *Rupture of the Tendo Achillis.*

DR. EDMONDSTON recommends the application of straps of adhesive plaister, to support the limb or joint in cases of sprains, and of injury of the muscles and tendons at the back of the leg.

He ruptured a part of the tendon belonging to the calf of the leg in dancing; and found, that by sheathing the whole limb in sticking plaister, he was enabled to walk soon after the accident, and that by thus taking exercise, he was cured in a much shorter time than when the limb is laid on a sofa and kept at rest.

We are sure that the practice recommended in this paper is proper. We have very often witnessed the great advantage which accrues from using exercise after sprains and similar accidents; and we shall have much to say on it hereafter. (Edinb. Journ. No. 66.)

ART. 8. *Erysipelas of the Face,* is a dangerous disease, from its being frequently followed by symptoms of head affection. The proper treatment of erysipelas, or St. Anthony's fire, as it is called, is not yet settled. Some bleed for it; others give bark; and under certain circumstances both succeed DR. DICKSON of Bristol, relates, (in Edinb. Journ. No. 66.) an interesting case, in which delirium, screaming fits, and other signs of inflamed brain made a part of the disease, and where bleeding to a large amount was followed by convalescence.

Our own experience agrees with this recommendation of antiphlogistic remedies; and we see, that Mr. RICE relates two very good cases of the same kind in the Medical Repository, No. 45. In both of these cases, the brain was much affected, and in both the liberal use of powdered colchicum cured the patients very rapidly. Colchicum acts, like bleeding, as an antiphlogistic.

ART. 9. *The Guinea Worm.*

MR. SCOTT, of the Madras Artillery, describes some cases of Guinea-worm; in one of which, after immersing the patient's leg in a running stream, he extracted twelve inches of the worm. It was round, of a pearly colour, and as large as a large violoncello-string.

Mr. S. believes, that the Gordius Aquaticus, or parent worm, pierces the skin of persons who wade in the rivers, and deposits its ova underneath: that the worm increases in size slowly, but without producing pain; that pain only arises when the worm arrives at maturity, and is therefore called on by its natural habits to make its way out, externally; and that the usual treatment of favouring its expulsion by wrapping it round a quill, as it gradually emerges from the skin, is much improved by frequent immersion of the limb in a running stream of water. (Edinb. Journ. No. 66.)

Art. 10. *Case of Cæsarian Operation.*

This operation has only yet succeeded once out of twenty-four cases in this country; although on the continent many women have been saved from death, by having their child taken away from them by this incision into the abdomen.

In the present case, the woman had become deformed after the measles; and therefore, although she had borne living children before, it became impossible now to finish the delivery, except by performing the Cæsarian Operation.

Dr. Henderson, of Perth, performed it in September, 1820. The patient died in twenty hours after the operation

It has been supposed, that all such patients die in this country, because the operation is deferred too long. Of course there must be some such reason; for it is impossible to believe, that an English woman cannot bear what a German female easily recovers from. (Edin. Journ. No. 66.)

ART. 11. *Cancerous Complaints.*

WE willingly give further publicity to MR. YOUNG's papers, on the treatment of cancerous complaints by pressure; because, as we have witnessed his mode of applying pressure, we can testify, that in our opinion, he applies bandages so scientifically, and with such extraordinary dexterity, that nothing like it has ever passed under our observation, as done by any other surgeon.

Mr. Y. has been much opposed in his practice by medical men; and certainly it must be said, that unwarrantable means have been sometimes used to check his endeavours. But we must also say, that perhaps Mr. Y. may thank himself for the opposition; for if he had conciliated the profession by mildness, instead of irritating many individuals, by too often putting his own strong feelings into appropriate language, not only would he himself have reaped more benefit from his ingenious and admirable practice, but the public at large would have received an equal share of profit, by its more general extension.

One of the cases given by Mr. Y. in his present paper, (London Med. Journ. No. 264.) we saw in its progress; and therefore we can verify the truth of his statement. A man had a tubercular disease of his eye-lids, and of the surrounding parts; which disease, the chief hospital surgeons in London pronounced to be cancerous, and refused to treat. Under Mr. Y's pressure the whole disease was entirely removed, and we believe the patient continues to be quite well. When we saw this case first, it was dreadful; the last time we saw it, the whole was perfectly well.

We shall recur to this subject again on a future occasion; for even as an improvement on the practice ef bandaging, Mr. Y's principles are of incalculable value.

Art. 12. *An Infant with Two Heads.* Mr. Jackson of Bolton, in Lancashire, describes a full grown child, born alive in August, 1820, with two heads.

One head breathed for forty minutes; the other did not breathe at all. The child could move all its limbs, and it opened and shut the eyes of both heads. The heart palpitated for some time after it ceased to breathe. It was a male child. It weighed 8lbs, 15oz. 6drs. (Med. Journ. No. 264.)

Art. 13. Mr. Marley, of Vigo Lane, relates a case of re-union of the end of a finger trapped off by a stone. The end of the finger had been separated for twenty minutes before it was re-applied to the stump. (Med. Journ. No. 264.)

Extraordinary cases of this kind do sometimes occur. The old Taliacotian plan of making a new nose is very nearly a similar case. We saw a successful operation of this kind performed. A triangular piece of skin was cut from the forehead, but without separating it at the top of the nose; it was then turned down, and united to the skin covering the part where the nose had been.

Art. 14. Dr. Smith, an army medical officer, relates, that a soldier had one of his eyes green and the other grey. He found, on enquiry, that they were formerly of the same colour; but that about three months after one eye had been much injured by the blow of a rope, it became of a greenish colour; and that gradually the colour had afterwards changed to "a light grass-green." There is, it seems, still however, a slight appearance of disease about the edge of the pupil. (Med. Repos. No. 66.)

Art. 15. An excellent volume on the nature of *fever* has been lately published by Mr. Sandwith, of Bridlington. Mr. S. was led to write this work, from having witnessed a severe epidemic at Bridlington, in 1818 and 1819; and it is very creditable to the author, that the great attention which he paid to the cases, and the industry with which he has recorded the peculiar symptoms of each and all of them, has enabled him to collect so much information as to make his work very valuable.

He found that bleeding was the most efficacious remedy; and that the cases were manageable, or the contrary, just as this remedy and the other parts of the antiphlogistic plan of cure, were or were not decidedly adopted. (Med. Repos. No. 86)

Art. 16. Baron Larrey, the celebrated French army surgeon, relates several cases of *fistulous sores* in the *cheeks* being cured by drawing teeth, with which the sores appeared to be connected. We once cured a case of this kind by the same means; much to the surprise of the man, who was a dispensary patient, and had applied, without much hope of relief; as he said, "he had been under the care of many medical men in vain." (Med. Repos. No. 86.)

Art. 17. The *milk of spurge* dropped on *warts* removes them. (Month. Mag. No. 350.) Would not the red juice of the greater celandine do the same thing?

CHEMISTRY AND SCIENCE IN GENERAL.

ART. 18. AN elaborate account of the curious and important trial between Severn, King, and Co., and the Imperial Insurance Company, is given by MR. PARKES.

In this trial, an important question respecting the *habitudes* of *boiling oil* was involved; the question being, whether or not a fire, which occurred in a sugar-house, arose from the boiling oil, which was used for the purpose of boiling the sugar.

Almost all the principal chemists in London were examined; and it was matter of diversion, to see how completely they differed in their opinions on the subject. The judge said, it was under such circumstances impossible to decide the question, as it certainly was; and of course the philosophers got into disgrace.

However, on consideration, it was impossible for them to be able to decide the question. It was not one of speculation and theory, but one of fact; and as the subject of boiling oil in the large way, was but little connected with the researches of experimental chemists, it was impossible for the latter to have been properly informed respecting it.

It is more agreeable to turn to the ingenuity of the contrivance by which sugar was boiled, by passing through it heated oil; the latter boiling at a much higher temperature than the former, and therefore causing the former to boil long before it itself had arrived at the temperature of boiling. The utility of the contrivance is to prevent the spoiling of the sugar, by boiling it over a naked fire; as also to avoid the difficulty and danger, which often arose from the boiling over of the sugar. It is such simple applications of science as this, as do honour to the chemical philosopher.

Art. 19. In an account of Capt. Parry's Polar expedition, it is stated, that an excellent opportunity was afforded for the examination of quicksilver in its natural congealed state, (for quicksilver is a metal as well as gold, the only difference being, that they melt at *very different* degrees of heat.) Large masses were frozen by the severity of the cold, and from them "we learn that it (quicksilver) possesses the characters of a ductile, malleable and tenacious metal; that, in these respects, it appears to rank between tin and lead; that it becomes brittle and easily frangible when near its melting point; and that a piece of the size of a walnut, dropped into a tumbler of warm water, occasioned its instant congelation, accompanied by the fracture of the glass."

Art. 20. It was formerly considered to be curious, that a negro's skin should be black; because as black absorbs heat more rapidly than any other colour, it was said, that it was the worst possible tint to preserve the skin from the effects of a tropical sun. But, Sir Everard Home has found by experiment, that whilst the skin is blistered by exposure to the sun's rays when covered only by thin white linen, no such injury occurs when black crape is used. Thus, as the black colour acts by converting the radiant heat of the sun into sensible heat, it in reality prevents the scorching quality of the rays; whilst the increase of sensible heat is neutralized by the corresponding increase of perspiration which naturally takes place. (Brande's Journ. No. 20.)

Art. 21. It is now perfectly ascertained, that the *red snow* of the Polar regions, is formed by the vegetation of a fungus, of the genus *uredo*. The proper soil of this plant is snow at a temperature far below 32°.

Dr. Henderson, in the Annals of Philosophy, No. 1. relates, that Pliny was aware that snow might become red; and he found that it was old snow which became so. His words are, "*Ipsa nix vetustate rubescit*;" or in English, even snow becomes red by age.

In the same number, an interesting account is given of two unsuccessful attempts to *ascend Mont Blanc*, by Dr. Hamel and others. An accidental slipping of the snow on which they walked, overwhelmed them when near the top, and three of the guides were suffocated. Many interesting observations are given of the effects of the rarefied atmosphere of high situations, in producing difficult respiration, causing fatigue, quickening the pulse, inducing thirst, and destroying the appetite. The danger of the ascent, in common cases, arises from the crevices between the masses of ice, and over which it is necessary to pass.

Art. 22. *Of Sounds Inaudible to Common Ears.*

Dr. Wollaston, with his accustomed ingenuity, has remarked, that no person can hear sounds which are above a certain note; probably because the stretching of the tympanum of the ear has its limit at those notes. There seems no assignable limit to the hearing of low notes; whereas, it is easy to fix the point to which any person can go in hearing sharp or high sounds; for the limits are very small.

Dr. W. makes a striking and entertaining use of his observation. By means of a series of very small organ-pipes, he produces an ascending gradation of sounds; and he finds, that the point of hearing distinctly, varies in different people, and even according to the health of the same persons; so that at last he comes to certain notes which some of the company can hear and others cannot.

This is an unlooked for circumstance; although on consideration, it is easy to see that it must be so. (Brande's Journ. No. X.)

Art. 23. *The Mildew in Wheat* may be cured by sprinkling the diseased stems with a solution of salt. Six or eight bushels of salt is required for an acre; but the increased value of the salted straw as a manure, repays the expence of the salt. Two men, one to spread, and the other to supply the salt, "will get over four acres in a day."

Art. 24. *Wasps* feed greedily on yew-berries, hence *yew trees* protect fruit from *wasps.*

Art. 25. *Eggs* may be *preserved* by covering them over with a coat of gum arabic, and then imbedding them in charcoal.

Art. 26. A barrel of damp oatmeal lately took fire; it is supposed on the same principle that wet hay is consumed.

Art. 27. M. Guy Lussac rendered cloths, as muslin, nearly incombustible, by immersing them in a solution of phosphate of ammonia and borate of soda. They were carbonized by heat, but would not inflame.

Art. 28. Capt. Bagnold has found, that in hares and rabbits killed in November, a tape worm is found in the intestines; and that his pointers and spaniels, employed in killing them, were afterwards affected by tape worm. He cured the dogs by feeding them for ten days on potatoes. It seems that the dogs were fed on the paunches of the killed rabbits.

The above matters of information are abridged from Mr. Brande's Journal, No. X.

Art. 29. In the Edinb. Philosoph. Journal, No. 7, a method of constructing *bee-hives* of wood, so as to resist the severest winter cold, is described by Mr. Jameson; also, Mr. Dunbar gives "his observation on *bees*, made by means of the mirror-hive." Mr. Jameson covers his hives with a stratum of charcoal. Mr. Dunbar's observations are, on the effect of introducing two queen-bees into one hive (one is destroyed by the other bees); and on the power which bees possess of forming a queen bee, out of the worm of a common bee. The observations vary somewhat from those of Mr. Huber.

Art. 30. In the same journal it is stated, that flocks of *starlings* generally alight on the ground in *circles*; that Mr. Swainson is publishing zoological *illustrations of birds*; and Mr. Selby, "the natural history of *British birds*, (both works are much recommended): that *serpents* with *two heads* are not uncommon; neither are *hermaphrodite butterflies*; and that an old *packing sheet*, covered with *oil*, took fire spontaneously, when lying in contact with a wicker basket.

Art. 31. Interesting notices also are given of Capt. Parry's *Polar Voyage.* The sun entirely disappeared on Nov. 11, and reappeared on Feb. 3. "Vegetation was marvelously rapid." Some account too, is added of Lieut. Franklin's land expedition to the Polar Sea.

Art. 32. Dr. Wilkinson gives many details of the *antiseptic* qualities of the *pyroligneous acid,* in Tilloch's Mag. No. 273.

This acid of wood is found to be very efficacious in preserving vegetable and animal food; but it is not so useful without some addition of salt. The plan is, to add two table spoonfuls of the acid to the pickle for a ham of ten or twelve pounds; and at last, to brush the ham over with the pure acid once or twice. This process gives it all the flavour of smoke-drying; and indeed the smoke of wood is antiseptic, merely on account of the wood-acid which it contains.

Meat may be kept sweet also by this acid, as we have found on trial; but the meat requires to be well washed before it is cooked; and even then it has an acid taste, which is however not disagreeable.

Art. 33. Dr. Ure, of Glasgow, has lately published an excellent *Chemical Dictionary.* So says Mr. Tilloch.

Art. 34. *Sweeping Chimneys.*

It is proposed by Mr. Feetham, to make a door into each chimney in the attics, and then sweep the upper part by means of a long-handled brush, and the lower by a brush worked by a rope; one man being at the top and one at the bottom of the chimney. The Society of Arts have voted the silver medal for this communication.

ART. 35. *Longevity in Russia.*

THE tables of longevity, published for the year 1817, in the Russian empire, give the following results.

Amongst 828,561 persons who have died, all belonging to the Greek church, there appear to have been as follows:

1	above	140	years of age
1	do.	135	do.
7	do.	130	do.
21	do.	125	do.
51	do.	120	do.
83	do.	115	do.
783	do.	100	do.

An account also is given of a German soldier, living on the banks of Lake Champlain, who is now 135 years of age. He is very strong, and soldier-like; he can see and hear, and his youngest son is only 27 years of age. He never drank spirituous liquors. (Blackwood's Mag. No. 46.)

ART. 34. IT seems that CAPT. KATER has read a paper to the Royal Society, describing his discovery of a *burning volcano* in the *moon.* When examining the dark side of the moon, Capt. K. observed a luminous spot, which as he afterwards convinced himself, was a volcano in the state of active conflagration. Of course he could perceive the luminous spot no longer, when that part of the moon came into the sun's rays; and it is feared, that the eruption may be over before the time for observation again occurs.

Art. 35. The Preston Chronicle reports, that Mr. Parkes's plan for making *furnaces consume their own smoke*, has fully answered in that town. Several steam-engine chimneys are mentioned, from which no smoke is emitted; and the proprietors of the many steam-engines in that town, are so convinced of the efficacy of the discovery, that in a short time, Mr. P's invention will be applied to all the steam-engine furnaces in Preston; and thus, a dark and gloomy town, will be changed into one of an opposite character.

Science becomes doubly inviting, when we find it thus adding to the comforts of mankind, by its beneficial effect in remedying the inconveniences of social life.

As may naturally be expected, the smoke, which is thus burned, stands in the place of other fuel; but it seems, by experiments made by one of the Preston manufacturers, that the saving in fuel by this consumption of smoke, is not only appreciable, but very considerable.

No. 2, of this Journal, will be published on April 1.

A JOURNAL

OF

POPULAR MEDICINE.

No. II. APRIL 1821. VOL. I.

Original Department.

Art. 1. *Are the Interests of Medical Men affected by the present Publication?*

IN writing a work like the present, it is not intended to interfere, in the slightest degree, with the proper interests of the regular professors of the medical art. Indeed, no rational man could wish to do so; especially if he himself belonged to that profession, whose interests were thus endangered. Time was indeed, when such a publication would have materially injured the existing race of medical men; but at that time, physic was a mystery, carefully concealed from vulgar eyes, and the large wig, the gold-headed cane and formal manners, were at once indicative of bad taste, or of deceit, and a sign that there was something beneath, which required concealment.

And true it is, that at that time, the hypothetical principles of pathology, which guided the practitioner in his treatment of disease, and the consequent uncertainty of the means of cure which he possessed, did make it, in some degree necessary, that the confidence of a patient in danger of his life, should be gained by extraneous means; and therefore, it is not wonderful, that a fictitious and unintelligible explanation of existing symptoms became necessary, and that thus a system of concealment arose, in the intercourse between the medical man and his patient.

Many other causes conspired also, to keep up this erroneous practice; but times are happily now changed. The medical man has changed—he is not what he was. The great improvements which have been lately made in our knowledge of disease, has introduced a rational pathology into our practice; and as we can now, in most cases, explain to ourselves the true state of our patient's complaints, we are enabled to give a consistent and intelligible account of them to his enquiring friends.

It is indeed well for us, that the increase of our knowledge thus permits us to act rationally; for the public is also changed. Knowledge has diffused itself so universally amongst all classes of society, that the outward show of learning will not now stand for the thing itself; the sciences have been laid open to the world at large, and medicine amongst the rest, has been shorn of the imposing habiliments which it once wore, and it is now found, that the first principles of medical science are simple, and easily to be comprehended by every one; whilst even its deeper arcana are still so deducible from these first principles, that few cases of disease occur, in which a well-educated unprofessional man will not be able to understand, from the explanation given by his medical friend, what is the true nature and present state of their patient's case.

It is very pleasant, that medical men can look back on times past, and say, "this is as things *were*:" and it is equally agreeable, that they can now dare to speak the truth, and thus make common cause with the friends of a patient, instead of imposing on them by absurd explanations of his complaint. It is, indeed, especially so; for the public have now begun to see, that a good medical man of the present day, does not treat diseases, without forming to himself some intelligible account of the nature of the affection, and of the part in which it is seated.

Nay, it is probable, that this increase of knowledge on the part of medical men, has itself had a great influence in diffusing a more accurate idea of diseases, and of their modes of treatment amongst people in general, than before existed. Physicians formerly talked absurdly about a fever, because they were entirely ignorant of its nature; now, on the contrary, they tell their patient's friends, that the inflammation (as the case may be) is seated in the lungs, or the liver, or the head, because they have learned, that the essential character of a fever, is taken from some particular part being more disordered than the rest, and that the treatment mainly consists in the attempt to remove this state of disorder.

It is an old saying, that if a man speaks darkly about common matters, his own ideas are not very clear, even to himself; and it is equally true, that it is congenial to our social feelings to tell what we know: it therefore happens, that we are generally not slow in explaining ourselves satisfactorily to those around us, even in cases where some concealment may be thought (as formerly in medicine) to be advantageous on interested motives.

So it is, that knowledge works good in all cases, and that the very possession of information brings with it the desire for its further promulgation.

The question, however, here is, whether facilitating the diffusion of medical information amongst the uninitiated, is likely to be injurious to the interests of medical men.

Certainly, it must be granted, that it would at least increase the difficulties of their situation; or, in other words, it would become absolutely necessary for them to educate themselves so carefully, as to be able to stand the test of the constant examination, to which they would then be subjected. Well, so much the better—conscience, duty, every good, every interested feeling of the heart, would prevent us from complaining of a bond like this; in a case too, where the lives of our fellow-creatures form the stake for which we are called on to play. This, therefore, cannot be an argument against our present publication.

It is true also, that a general diffusion of the principles of medical science, would make diseases less frequent in their occurrence; and in this way the interests of medical men would be injured. But it would be disgraceful if such an objection were entertained, even for a moment. Medical men feel, and the world feels, that the great bulk of the profession are actuated by very different principles. It is too much the custom indeed, to hurt the feelings of medical practitioners, by alluding improperly, to their gains being founded on the distresses of others; but the history of the science will show, that physicians have, in all ages, been benevolent and kind-hearted: they have always been sincerely desirous of relieving, as speedily as possible, the distress which is so frequently brought before them; and what is much more to the present purpose, they invariably deplore the existence of that disorder which they are called on to cure, and express their sorrow at the circumstance with equal sincerity and feeling.

These, therefore, are not the men to complain when the sources of disease are dried up. They are, on the contrary, men who venerated Jenner for introducing the cow-pox, although they believed that it would inevitably cut off from them a very lucrative branch of practice; men who are always the first to forward any plan, by which the health of particular bodies of men, or of the community, may be amended or preserved.

It is not then by such men as these, that a work like the present will be condemned; at least if they think it likely that its object is attainable. It is more probable that they will rejoice in a proposal, which aims at so good a purpose; and it is confidently felt, that the medical world will aid and assist in the present undertaking, even though they believe it may tend to lessen the sphere of future practice.

But, true medical men will also feel, that whilst there will always remain enough of disease to occupy more perhaps than a proper proportion of the existing population,* the pleasure of practicing will be much increased, at least to the well-informed physician, by the new bond of union which must exist between themselves and their patients, whenever the latter understand so much of medical principles, as to estimate the skill with which the treatment is conducted, and feel pleased in co-operating effectively with their medical adviser, in making that treatment as short as possible.

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* Mrs. Marcet will tell us, that none is the *proper* proportion, because medical men are unproductive labourers. We can say, for ourselves, in reply, that we sincerely wish they were as unnecessary as they are profitless.

Is it necessary to say more on such a subject? Let it be however again repeated, that the great objects of this publication, are to teach unprofessional persons how to preserve their health, by pointing out the sources of disease;—to show them also, how they may understand the intentions of medical men in the cure of diseases, and thus be enabled, materially to assist in fulfilling the indications, that seem required for the removal of such diseases;—and otherwise to afford agreeable information on subjects, which are new to the public, because the observations of the many wise and good men who have written on medicine, are locked up in volumes, written solely to their medical brethren, but which subjects are as interesting and replete with instruction, as other branches of knowledge, which are thought to be more legitimate objects of attention and study.

ART. 2. ON THE EVILS OF NEGLECTING COLDS.

Observations on Colds. PART 2.

IT was shewn in the last number, how common colds are to be distinguished from such as are more dangerous. It is now recommended, that whilst care should be taken of all colds, because it was there seen how easily inflammation may arise, or become violent, or may steal from an unimportant part, to one which is of more consequence, the advice of a medical man should be asked in all doubtful cases; as it is better to err on the side of precaution, than to subject a patient to the many evil consequences, which arise from severe diseases being permitted to run on, under the idea that they are common colds.

It would be curious to learn the cause of a cold fixing itself on one part rather than on another; and why catarrhs and phlegmy coughs are common in damp cold weather, whilst pleurisies and peripneumonies occur rather in dry cold weather: but these are arcana which have not yet been revealed to us weak mortals.

This, however, we do know, that many fatal diseases follow colds, or are mistaken for them; and that many of these might be prevented, by proper attention to the cases in the first instance.

We related, in page 12, a case of inflammation of the larynx occurring suddenly, in what was thought to be a common sore throat. This was a very instructive case; for it is not a solitary one. Very many common colds become aggravated, and dangerous, and even fatal, from the occurrence of such sudden changes.

In another way also, colds are often exceedingly important if neglected. A person is predisposed to some complaint of the chest, consumption for instance. This pre-disposition may lie dormant in the constitution for many years, nay, indeed to the end of life, unless some exciting cause bring it into action. Now nothing is more likely to do this than neglecting a cold. For in cases where the irritation on the mucous membrane does not amount to perfect inflammation, and where, by such care and attention as are recommended in the last number, the pre-disposition may not be roused into action—if the inflammation be permitted to form, and it run along the mucous membrane down into the lungs, it may call forth the threatened mischief; or, the pre-disposition may be so strong, that the aggravation of a cold, into even very moderate inflammation, is sufficient to induce the dormant disease.

An abundance of cases in which this has occurred might be advanced, if it were necessary; for, in fact, consumption is generally preceded by an error, like one or other of those above described. In one sad case, which we recollect, a young lady, aged 18, the last of several children who had all died of consumption, took cold from an imprudent exposure of her person. Inflammation of the lungs followed, and though she had the best medical care, consumption supervened, and she died.

In another case, a young man who was predisposed to consumption, was attacked, in like manner, by inflammation of the lungs. Great apprehension was of course excited, and by skilful management, the inflammation was so entirely subdued, that one of the highest medical authorities said, in consultation, that no disease existed, and that the patient was only weak: but the seeds were sown; the young man never recovered his strength, his cough returned, his eyes became bright, and he lapsed into consumption.

For these reasons, therefore, no cold should be neglected in a consumptive patient, especially if his age be under twenty years; for if once the morbid action in the lungs commence, it is to be feared, that but few cases occur, in which it can be again stopped, even if it be ever so slight.

The foundation also of asthma is often laid by neglecting a cold. In many cases, asthma consists of an habitual morbid state of the mucous membrane, which lines the bronchia, or air-tubes; and this morbid condition is most frequently, nay, generally, produced by an inflammation of that membrane having, at some former period, been neglected. This hint will be sufficient for the present occasion.

Again, whenever a complaint of any kind has existed in a severe degree, it very often happens, that the parts affected, are left in so susceptible a state, probably from having been, in some degree altered in structure, that the person is much more likely to have a repetition of a similar complaint, than one who has not been thus previously affected. In this way, neglecting a cold becomes the cause of its recurrence in a severe form.

In many other ways also, do neglected colds lead to unpleasant or dangerous diseases. But enough has been said to shew, that it is always better to be certain, that an existing cold is nothing but a cold, and does not require further medical aid than common sense can supply; and doubtless, every medical man would be glad to answer a question on the subject, without feeling any disposition to make a case of it, as we are so often accused of doing. This would especially be the case, if such arrangements were made in the medical profession, as to abolish the present odious mode of paying a general practitioner, according to the quantity of medicines which he may supply, rather than by a moderate compensation for his time and skill, in the shape of a fee.

We shall often advert to this subject of medical reform; and with regard to the immediate subject of this essay, if the warm weather were not approaching, we should enter further into an explanation, of how colds and similar complaints are to be prevented from occurring, as well as of what state of constitution, and kinds of habits, predispose most to their formation.

The subject will be resumed on the approach of winter.

OBSERVATIONS ON CHILDREN.

ESSAY THE SECOND.

Art. 3. *On the Education of Infants.*

As it will be the object of future essays, to explain the important influence of early moral treatment, in preserving the health of children, the subject of their education in infancy will be slightly adverted to here.

Were a direct question asked, with regard to the capacity of infants to receive instruction, it would assuredly be answered by the great majority of persons, that they have none. Indeed it is a common opinion, that the mind is so very imperfectly developed in infancy, as to render it impossible to convey instruction at that early period of life; and yet the practice of the very persons who profess to adopt this opinion is, unconsciously the reverse of their theory. Every mother is aware, that her infant, very soon after its birth, knows when it is going to suck; and almost every one is anxious to get her child into good habits, as she says, by obliging it to submit to have certain things done at certain times. Of course, this is directly teaching a child; and the result proves the propriety of the practice; for the youngest infant soon learns the task which is imposed on it.

Yet, on the other hand, the same mother would not thwart her child, of a month old, when he cries from passion, or from any other wilful cause, because "it knows no better;" but would rather fondle it until it is quiet: which really means, that she has taught it something indeed, but not what she intended it should learn. By being allowed to gain its wishes, one more instance is added to the small sum of its experience; which has, however, even thus early, taught it the important fact, that to resist and to cry, is the way to attract attention, or to gain its ends.

Fathers are naturally even more ignorant than mothers, of their children's capacity. Many fathers will avow, that they never think of looking attentively at their children until they are a year old; whilst almost all shut their eyes to the fact, that their sons at six or eight months old, are the masters of the house, and domineer over their mothers and nurses in the most tyrannical way.

The truth too is so palpable! It is wonderful how a mother can find herself obliged to lean over her child for half an hour together, in an uneasy posture, when it is going to sleep, without detecting the fact!—that she should not dare to stir, lest he open his eyes and begin to cry, because he thinks that he is neglected!—but it is still more wonderful, that she should say, "what a cunning little fellow he is," without the truth flashing across her mind, that such capacity might be turned to better account.*

Let us, only for a moment, consider how information comes into the mind. No one, at the present day, thinks of considering, that any of our knowledge is intuitive, except indeed, such as immediately relates to the preservation of our lives and species.

* In Nicholson's Philosophical Journal, Vol. XV. p. 42 and 181, are two papers from a father, who writes the history of his child's life for the first four months; and these papers contain, probably, the only attempt extant, to describe the early mental efforts of infants. As such, they deserve considerable attention, although the imagination of a fond parent, may perhaps have drawn the picture in stronger colours than future experience will verify.

The writer concludes his first paper by making some general observations on the surprise, which such facts as he relates must produce; and especially says, that "Persuasion, promises, lies, meum et tuum, individual character as to benevolence, and its reverse from physiognomy, and as to morals, from the behaviour, preference of other infants from similarity of action, jests, mockery, theatrical simulation in the management of dolls and puppets, and a prodigious number of other compound associations, occupy the minds of infants, long before the expiration of the first six months of their existence."

A child, by instinct, that is, perhaps by the smell, for instinct is, at the best, but an unsatisfactory expression, clings to its mother, and sucks when put to her breast; but it probably gets very little other knowledge from nature. It possesses, indeed, the power of being acted on by impressions from without; and it is probable, that all information with regard to external matters, is obtained by the perceptions which are acquired, through this power of being acted on by them, or as we say, by experience.

By using its eyes, and powers of touch, the child gets its first knowledge of surrounding objects; for without these faculties, it would remain for ever ignorant of the external world. But the progress is wonderfully slow; for although the senses of vision and of touch, are under continual exercise from the time of birth, yet the eye and hands are not used in conjunction, till the end of the fourth month.

On the whole, the reception of these impressions gives the child much pleasure; he is, therefore, eager to extend his experience, and soon learns to express the pleasure which he feels, by motions and little noises. Other impressions, however, such as arise from the necessary duties of the nurse, to ensure cleanliness, &c. give pain, and he cries accordingly; having learned that mode of expressing displeasure perhaps, from the convulsive cry by which the lungs are first inflated, and the action of respiration accomplished immediately after birth.

The information which is acquired by the sense of hearing; is consentaneous with the impressions received through the power of sight; and as these impressions also are principally productive of pleasure to the child, it consequently attends to sounds, and by degrees, learns that certain sounds are intended to express certain things; it distinguishes the voice of its mother, understands the tones of displeasure, shuts its eyes when hushed to sleep, at least when in health, and shows signs of intellect in a hundred ways, which, in general, pass by unheeded.

Now let us consider, how much of this information comes through the medium of the association of ideas. A child, from reiterated experience, associates pleasure with some sounds, and pain with others; going to sleep with being placed in a certain position, or being spoken to in a particular tone of voice, or being moved in a certain direction; and in this way, habits are acquired.

Grant but all this, and must it not follow, that these habits might as well be good as bad; such as will conduce to the happiness of the child, as easily as such as are of a contrary description? Assuredly they might;—in fact, as we do teach our children, although we teach them unconsciously, they necessarily learn many things which are productive of much evil to them; for they seldom lose in after life, what they learn in childhood.

This consideration alone ought to fix the attention of parents, on the proper moral treatment of infants, since so much of their future characters is thus shown to depend on it. Nay, it is even probable, that the passions, bad as well as good, owe their origin to good or bad treatment during infancy.

The passions form no original fundamental part of the mind. There exists, indeed, a greater or less degree of sensibility, or of that power of receiving impressions which has been before spoken of; and therefore, as the impression will be more vivid as the power is stronger, the same treatment, whether good or bad, will produce a different degree of good or bad effect on different children.

It is chiefly, in this way, that children grow up with different characters, though brought up nearly in a similar way; but it is sufficient here to mark the fact, that many of the passions of after-life, owe their origin, either directly or indirectly, to the peculiarity of treatment adopted in early childhood. Thus, if a child be made to cry frequently, and especially if he be allowed to learn, by experience, that perseverance in crying produces a relaxation in the thing which offends him, he becomes passionate; he resists every thing which interferes with his present feelings, and in a very few months, becomes the tyrant of those around him; a tyrant, the more implacable, and the more unreasonable, because he is more ignorant, than any of those who exert such propensities at a more advanced age.

How such a state of mind leads to other bad passions, will not require to be illustrated.

The reverse of this picture is equally distinct, and much more satisfactory. An infant is permitted to follow his own propensities, at least while they are likely to lead to good results, and as far as is possible, to acquire knowledge in his own way: he is put to inconvenience as little as may be; the necessary arrangements of his dress, &c. are quickly completed, and he is made to cry as little as possible.—Necessary duties, however, are strictly attended to: he is laid down on his pillow when it is proper for him to go to sleep, and he soon learns not to cry, because he finds that it is useless; a similar principle is acted on, in all his social intercourse with those around him;—and in this way, he acquires good habits.

The theory is this. A child learns bad habits, by being, in the first place irritated, and in the second, by finding that being angry causes the irritation to cease. Good habits therefore are to be taught, by avoiding all unnecessary causes of irritation; and secondly, by making the child, or infant, understand, he must submit to such restraints as are necessary for his welfare: and so easy is this to be done, as will be shown hereafter, that even the youngest infants require little more than a single lesson, to acquire a good habit, or to lose a bad one, if the lesson be judiciously followed up.

An infant who is thus educated, is perfectly under controul; he disregards what are great evils to other children, and a constant matter of contention between them and their nurses; the good passions are fostered and made familiar, whilst the bad ones are either unknown, or are stifled at their birth.

Whence arise, on the contrary, the violent passions which characterize savage life? Doubtless, from the inefficiency of the early education of children in uncivilized countries. In such children, the natural propensities of the infant are allowed to become evils, by being permitted to run to excess; and thus bad passions are generated from want of controul, where good ones would have been formed, if a proper restraint had been imposed in early infancy.

It is of such importance to understand this subject well, that a few more observations on it may be excused. Well would it be for future generations, if parents could see, that by laying, as they too often do, the bad passions and mental defects of their children, at the door of nature,—of that nature who has done so much for us, they are only forming veils for their own ignorance or idleness. Nature does certainly endow children with various degrees of sensibility, or of that power, which, by cultivation, becomes afterwards intellect; but it is we ourselves who direct, whether that sensibility shall lead to the forming of a good or a bad disposition. We unconsciously direct our children into the path along which they are to go. By false kindness, and the want of a steady good principle in our mode of educating them, we teach them how to be self-willed, passionate, and tyrannical: by a contrary treatment, by having precise ideas on the subject, and by following steadily a plan of education which has been formed on good principles, we ensure, to a considerable extent, good-temper, obedience, and many other good qualities, as the attributes of our children.

I have in my eye, a mother whose child is happy, and she herself not put to inconvenience, because the whole affairs of her nursery are carried on as if by clock-work. Although the child is washed twice a-day with cold water, it scarcely ever cries, because the whole toilet is made subservient to a continued conversation, between the mother and her infant of three months old; the part of the latter being kept up by constant smiles and occasional noises, expressive of its pleasure. In the evening too, after undressing, the child is put into its cot awake; it goes to sleep, almost without crying; it sleeps invariably for four hours; is then taken up, or wakes, and is fed: it is again laid down and sleeps for four hours more, when it awakes and is again fed: it then sleeps till it is time to get up. This process has invariably taken place since the child was a month old, and is an excellent illustration of what good management may do.

It is very different from the effect which is produced by the more usual plan, of letting infants go to sleep in the arms or on the lap. Who has not witnessed the trouble, the scolding, the crying, the passion, both on the nurse's and child's part, and the wasting of hour after hour in fruitless endeavours, which so often occur, where children are hushed to sleep in the ordinary way? not to mention the attendant evil of the nurse's being obliged to get up ten times in the night to rock them again to sleep.

In another part of these essays, some observations will be made on the good and bad qualities of nurses; but, so many of the evils of children arise from the ignorance of nurses, whilst infants, in general, learn so few bad habits, when taken care of by the superior intelligence of their mothers, that it was impossible not to mention the subject in this place.

It will now, however, be easily understood, that much of the future character of the man, is formed by the early moral treatment of the infant.

It has indeed been frequently remarked, how often great men have owed their greatness to the superior intelligence of their mothers; and the reason of it will now appear with sufficient distinctness. An intelligent person acts properly, often without knowing the reason of his conduct. So, mothers treat children with propriety, partly from having had the sense to perceive, that evils follow an opposite conduct, and partly from reasoning correctly on the subject; but it is probable, that the view now taken of the matter, has never been distinctly stated by any author. It is therefore offered with great diffidence, although at present, with a full conviction of its truth; and with a further assurance, that if it be correct, an extensive promulgation of such truths, will not only enable very skilful mothers to direct their efforts with greater precision, but will teach many other less-gifted parents, to raise their children to a point much higher in the scale of intellect, than they at present commonly attain.

Art. 4. *On Burns and Scalds.*

The subject of burns and scalds, is one of those which we think it right to treat practically. It is so important not to lose time in cases of accident by fire, the pain attending them is so acute. and above all, the necessary means of relief are so near at hand, and so easily applied, that in no case should the patient remain longer than a few minutes after the accident, without efficient treatment being applied for his relief.

Burns and scalds form essentially the same state of disease; the injury done to the constitution is of the same kind in both cases, and the treatment for both is perfectly similar.

But the medical world is even now divided in opinion, with respect to the pathology of burns and scalds; or rather, as relief is obtained by such various and apparently opposite modes of cure, their explanations have been unsatisfactory, both to each other and to themselves.

Some surgeons, and the ancients with them, treated such accidents by the application of cold externally, and of depletory remedies internally. Indeed this was, until lately, the common mode of treatment. But as it was found, that stimulants applied to the injured part, relieved the pain sooner and more permanently, the cold treatment has been nearly abandoned, and the hot treatment, as it is called, adopted.

The efficacy of stimulating applications was, as has often happened in medicine, made known to the profession by the empirical practice of unprofessional persons. In the north of England, very extensive burns frequently occur from the explosions of fire-damp in the mines; and so famous was the treatment of burns and scalds by turpentine, that it was a very common stipulation for pit-men to make when hired, that they should be treated by a particular person, in case of being burnt in the pit. This person had acquired great and deserved celebrity for his treatment of burns, and his fame descended after his death, in an equal degree, to his wife.[*]

Many more cases might be adduced, in which, valuable remedies have been made known to medical men, by the traditional experience of unprofessional persons. The public are in possession of much valuable medical information, on the use of medicines, little known to the profession; and whilst the obligation thus conferred on us by old ladies, calls on us to return the favour, by teaching them to amend their theories, as is the object of this publication, we should not shut our eyes to the fact, that, by enquiring into the practice of village Galens, many other valuable remedies may be added to the common stock of medical knowledge.[†]

It was Dr. Kentish who first called the attention of the profession, specifically to the treatment of burns and scalds by stimulants, and we have entered into the above account of the popular practice in the north of England, to add, that Dr. Kentish, from his long residence in those parts, had ample opportunity of knowing the fact, and probably derived his information from that source, although he has not said so in his printed works.

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[*] It would seem also, that turpentine had been long celebrated in Scotland, for its utility as a remedy for burns.

[†] We shall very soon refer specifically to the subject of popular remedies; but we take this opportunity of requesting, that such of our readers as are acquainted with efficacious nostrums, will favour us by communicating them to us for the benefit of society.

It is unnecessary to enter into the theoretical explanations, of the mode in which turpentine acts, which have been given by Dr. K.; but before the plan of treatment is laid down, a few words may be premised, on the state of constitution which is induced by the operation of fire on the skin.

Burns and scalds are essentially the same; but they differ in some practically important particulars. The heat applied by boiling liquids, is not so great as that which often accompanies burns from heated solid bodies; but as liquids easily extend themselves over a large surface, burns are generally deeper and more violent than scalds, whilst the latter are more superficial, and generally more extensive.

Now, though the depth of a burn forms an important index of the danger which attends it, yet the extent of such an injury is a still more important one. Hence, burns are generally the more dangerous, according to their size, and scalds, according to their extent; and in fact, though scalds are commonly superficial, and of but little importance when small, they become very dangerous when they are extensive, as very frequently happens.

In scalds, the true skin is seldom destroyed; and hence, the outer, or scarf-skin being only, in general, raised into the form of a blister, the true skin, or cutis beneath, is only injured in a sufficient degree, except in severe cases, to make it secrete matter without ulceration: but in burns the cutis is often entirely destroyed; and thus very extensive wounds are frequently produced.

Where therefore, the cuticle is blistered, it seldom happens that the cutis is much injured; whereas, if the outer skin is charred and dried up, it is to be expected, that the vitality of the parts beneath is destroyed.

It would appear, from experience, that burns and scalds on the body are more dangerous than when on the extremities: indeed, patients have often died, apparently from very small ulcers on the body from burns.

Moreover, it generally happens, in severe cases, that the powers of the constitution are greatly and suddenly depressed, or almost annihilated. Hence, the skin is in such cases cold; paleness is present, shivering also, and the vital powers are in other respects destroyed.

Such being the circumstances which usually mark severe cases of burns and scalds, it will be right to place such cases, as soon as possible, under medical care: that is, when the injury is extensive, especially if on the body; when it is severe, as marked by the charring of the outer-skin; and when the powers of life seem to be decidedly depressed, as shown by the dangerous chilliness, paleness, and coldness above described.

The necessary immediate treatment, however, is in every body's hands, and it should be instantly and decidedly carried into effect, under all circumstances.

Attention should be first paid to the state of the constitution; and if the coldness and shivering be present, hot wine or brandy should be given liberally, and repeatedly, with as much as a hundred drops of laudanum in the first dose, if the case be so severe, that the patient is torpid enough to be deprived of his senses. The laudanum may, in such cases, be repeated in a like dose, every three or four hours, or oftener, for two or three times; but of course, forty or fifty drops will be sufficient in less severe cases. In children above eight years of age, from ten to fifteen drops may be given in the above bad cases, and repeated in like manner; and even by infants, one, two, or three drops will be borne very well.

Of course, it is not intended that laudanum shall be thus repeatedly administered, except a necessity for it is shewn by the continuance of the coldness and shivering, by the pain, and by the torpor of the constitution; but in all, except very mild cases, a full dose, as forty or fifty drops of laudanum in some hot brandy and water, or wine and water, will be advantageous soon after the receipt of the accident.

So much then for internal treatment. The external surface of the body should be kept warm; a large blanket should be placed under and over the patient, as he lies near the fire, either on a bed, or on the knee; some oil, or spirits of turpentine, or any other preparation of turpentine, should be made as warm as it can be borne, and the burned or scalded parts, be lightly smeared over with it, by means of a large camel's hair pencil, or the feather of a swan or goose quill. The different injured parts should thus be rapidly covered by the turpentine, and the operation should be repeated again and again unceasingly, until the pain has abated, and is nearly gone.

When the pain has thus receded, which will occur generally, in some time between half an hour and two hours, some common yellow basilicon ointment* should be mixed up, with as much warm turpentine as will make it as thick as honey, and the parts *accurately* and *entirely* covered by pledgets of lint, spread thick with this liniment. A roller is then to be applied, and these dressings must not be removed for twenty-four hours.

On the next day, a sufficient number of pledgets spread with the same liniment, only made with half the quantity of turpentine, must be prepared, and care must be taken in dressing, to remove and change only one of the old pledgets at a time, so that the wounds are exposed to air for as short a time as possible. The dressings are again to be left on for twenty-four hours.

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* Or take of yellow resin and yellow wax, of each an ounce, and dissolve them by means of heat, in two table spoonfuls of olive oil.

The same liniment, still further lowered, may be used on the third day; and on the fourth, common Turner's cerate will form the best application. With this cerate the wound may be dressed till it is well.

When turpentine cannot be procured, camphorated spirits of wine, or the strongest spirits of wine, made stronger, by adding any of the essential oils, and therefore arquebusade, and eau de Cologne; or spirits of lavender, mint, peppermint, or any other of the sweet smelling spirits; or brandy, rum, or gin, made stronger by the addition of ether, will answer the purpose. They must be applied as warm as the patient can bear; and, by the bye, both these and the turpentines may be the most conveniently heated, by immersing a bottle containing them in hot water.

After a while, when the pain abates, the strength of these applications may be lowered; equal parts of water and spirits of wine, or brandy, &c. without the ether, may be used; the heat of it being also diminished.

When the pain has entirely subsided, the same dressings of yellow basilicon and turpentine may be used; for by this time turpentine may, in almost all cases, have been procured.

One thing remains—if the skin be blistered, the water should be let out by means of one or more punctures of a needle, taking care to prevent the admission of air to the inflamed skin underneath the blister.

Whenever then a burn or a scald takes place, let the patient be taken into a room with a fire in it, and dispatch different persons to fetch the following things;—a blanket, the bottle of turpentine, a large round or flat camel's hair pencil, two or three goose-quill feathers, a kettle of boiling water, and a jug for warming the bottle of turpentine in, a bottle of wine or brandy, tumblers and wine-glasses, a saucepan, and the laudanum.

In the mean time undress the patient, or at least uncover the burned parts, and keep the rest of the body warm, by wrapping the patient in the blanket.

When the attendants return, give wine, brandy, and laudanum, as directed above, put the turpentine bottle into the jug containing the hot water, and let one or more persons, according to the extent of the injury, keep constantly applying the turpentine made warm as directed.

In this way, no time will be lost, and the patient will soon be relieved.

Fever often occurs *after* burns and scalds, especially in strong persons. When this happens within a day or two after the accident, and especially, if the pain in the part increase, apply a poultice, and place the patient under proper medical care.*

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* It ought to be needless for us to say, that the laudanum and stimulants have now become unnecessary; and indeed, they will be hurtful after the first pain has subsided.

It should be further known, that parts, if left in contact, are particularly apt to grow together as the cure proceeds; and great care is often necessary to prevent this, in the fingers, toes, sides of the nostrils and eye-lids, and also under the chin, and in the bends of the arm.

This after-treatment of burns and scalds however, need not be particularly dwelt on here; for, except in slight cases, an experienced medical man should always be consulted as soon as possible; and the reason is this. Burns and scalds, like injuries of the head, are attended, within a certain number of hours after the accident, by symptoms, very different from those which are produced by the accident itself. In injuries to the head, cordials are often required at first, although the most decided depletion is *very soon after* absolutely necessary. So also in many cases of burns, the first great symptoms require the liberal use of cordials, in all the forms above described; but the secondary symptoms are generally those of fever and inflammation; and they arise, as we suppose, from the re-action of the constitution after the accident, running to excess. Hence it is, that if the hot turpentine were applied for any considerable time, after the first pain had subsided, it would itself cause inflammation, and produce a fresh accession of pain.

With regard to other remedies for burns and scalds, it may be said, that if none of the remedies above described, can be procured, the constant application of ice, snow, or cold water, as recommended by Sir James Earle, will relieve the pain instantly; but, as it will as instantly return if the application be intermitted; and as it is often required to continue it for many hours, the turpentine is to be preferred; for though the pain is not so speedily relieved by turpentine, the relief when obtained, is much more permanent; and it is probable, that cold is injurious in the state of congestion and torpor, under which the constitution suffers in the early stages of burns and scalds.

M. Larrey, a great French surgeon, dresses burns and scalds with saffron ointment, which he says eases the pain and prevents inflammation; evidently, as we believe, by excluding the contact of the external air.

On the whole, however, we strongly recommend the turpentine plan, as above described.

Miscellaneous Department.

This portion of our Journal will consist of Critical Analyses of New Publications, and a Digest of such parts of the Medical and Scientific Literature of the Day, as may either afford interesting information to our Readers, or allow room for useful remarks on our own parts.

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ART. 5. REVIEW of

An Essay on the Disorders of Old Age, and on the Means for Prolonging Human Life. By ANTHONY CARLISLE, F.R.S. &c. 8vo. 1818, 2d edition.

IN selecting works for analysis, it is not our intention to restrict ourselves to such as are or have even been published of late years. It will be sufficient that they contain information, which we wish to lay before our readers; so that matter, rather than novelty, will direct us in our choice.

Indeed, much of what we wish to inculcate, is to be found scattered over the works of other writers; and as we are not anxious to be thought particularly original, but would rather see every one continue in full possession of the sweets which we have gathered from his stores, it will form one part of our province, to give a condensed statement of the valuable observations on the art of preserving health, which occur in the works of those authors who were great in their day; but who, perhaps on account of some collateral defect in their writings, have passed from before the public eye, and are now remembered only by name.

The works of the million speedily disappear, and are, for all practical purposes, forgotten. Even writings of a superior stamp share this common lot; and indeed, we confess, the knowledge that such must be our own fate, has had some influence in giving our publication the continued form of a periodical journal.

Another and a more weighty reason however, decided this question of form. If an author put his thoughts into a connected shape, and publish them as a book, he is praised perhaps by those who peruse what he has written; but, from the little care with which persons in general read, his principles are not comprehended, a superficial view only is taken of them, and therefore readers lay down his work, feeling perhaps that they have acquired a competent knowledge of its contents; but, having in reality, possessed themselves only of a few general, or striking facts, not in any degree, sufficient to prevent them from forgetting the whole within a short time after reading it. Thus books are read and are laid on the shelf to make room for others; which being treated in a similar manner, pass away without exerting their due influence on society. But if a periodical form of publication be adopted, an opportunity for inculcating again and again the supposed important information, is allowed; and thus, inferior talents may perhaps accomplish, by repeated attempts, what one effort, however well directed, had failed to accomplish.

Mr. Carlisle, the author of the work before us, has, throughout his long professional career, practised medicine on the broad principle of thinking it his duty to teach the preservation of health, as well as to cure diseases;

and therefore, his opinions will deservedly have much weight with our readers. His subject too, "The Disorders of Old Age," and the prolongation of human life, is sufficiently interesting.

His main position is, that death does not take place in advanced life, "as the inevitable consequence of time," but that it generally results from "some well-marked disease."

In commenting on this most important axiom, he shows, that these diseases may be in general relieved; and that, whilst they usually appear first, as affections of the alimentary canal, soon after the middle period of life, they are to be combated by cathartics, bleeding, and diet.

After giving this general account of the disorders of old age, Mr. Carlisle enters into a full explanation of his opinions on diet, in all its branches, and of its effect in causing and curing these disorders. He then treats of clothing, warm-bathing, exercise in the open air, and the effects of temperance; of the most efficacious remedial treatment, and especially of the use of cathartics, bleeding, acids, alkalies, mercurials, and chalybeates, in the different classes of diseases for the cure of which they are adopted; and after giving a general account of each disorder in passing, he concludes, by pointing out the circumstances, which do or do not allow of surgical operations being performed on old persons.

We shall condense such of Mr. C's observations, as appear to be the most valuable.

"According to my observation," says Mr. C. "the disorders of senility may often be relieved, and our declining years extended far beyond the ordinary number, by judicious management."

It is of importance to watch over the slight deviations from health which occur in old age; for if they continue, "the error of a subordinate part will, by degrees, encroach upon the organs essential to health, and the accumulation of such derangements soon declares us to be mortal."

In remedying these disorders, or rather in preventing their occurrence, Mr. C. says, "that the wholesome regulation of diet, clothing, exercise, and air, are often more important than the administration of drugs, blisterings, or bleedings."

Early rising, however, and activity, are to be regulated "by the state of bodily strength, the seasons and the habitual exertions of mind." "Quietude and repose, best become the constitutions of the aged; since the springs of life in them, are rather weakened than invigorated by excessive action."

"When the age of maturity has passed, the common dangers to life are to be discovered in disorders of the head, the stomach, the bowels, the blood-vessels, and the liver; and they display themselves by apoplexy, palsy, indigestion, obstructions, inflammations, jaundice, or dropsy."

These diseases are generally to be removed by proper care, and they may especially be prevented from forming fully; for as Mr. C. says, "few persons are attacked by dangerous disorders, without due notice and repeated warnings." Head-ache and giddiness precede apoplexy and palsy; flatulency, acidity, head-ache, and local pains, precede affections of the stomach, bowels, and liver; and derangement of the general health, inflammations.

These signs of bodily infirmity begin to appear, generally about the age of sixty; and a plethora, or an overfullness of the vessels is the most common attribute of old age. Hence Mr. C. inveighs against the common aversion to blood-letting, and with justice; for many persons are kept alive only by habitual losses of blood. Cathartics also are very valuable as a remedy against these and other disorders of old age.

Diet, however, is the sheet-anchor, on which those who wish to prevent such complaints, must depend. "Perhaps the first source of all the infirmities of senility may be traced to effects, arising from imperfectly digested food," and a failure, or errors of the stomach and its dependencies, precede nearly all of them.

The diet of old persons, says Mr. C., should resemble that of invalids, of children, or of breeding or nursing women; and if the teeth be decayed, the food should be minced or pounded, so as to imitate the action of chewing in dividing it. Animal food is the best; although, in many cases, the farinaceous vegetable matters, such as arrow-root, &c. are very applicable.

The red-fleshed meats are the most easy of digestion. Hence Mr. C's observations lead to the following scale of meats, &c. as indicating their relative digestibilities. The most digestible meats are venison, game, mutton, beef, and the flesh, not the fat and skin, of the duck and goose. Then follow white and young meats, such as fowls, turkeys, &c. veal, pork, and we suppose, lamb. Salted meats are inadmissible. Veal is improper, on account of the sugar of milk which it contains, running rapidly into fermentation; pork, because of the excess of fat which is mixed with it.

Fish is placed after meats, from its proneness to putrefaction; but of fish, the most digestible are, whiting, perch, flounders, smelts, skate, haddock, turbot, and soals;

the next, herrings, mackarel, salmon, and eels, and the most pernicious are said to be shell-fish.

Fish is better when boiled than when fried, and roast meat is preferable to that which is boiled.

Uncooked vegetables are improper for the aged. So are the hard pulped fruits, and all dried fruits; as are also nuts, almonds, and all kinds of sugared confectionary.

It is, according to Mr. C., equally necessary to assort the food harmoniously, as to choose it properly. "The most simple, bland, and easily digested food may be spoiled, by mingling substances of difficult digestion." Those only which are the "most nearly allied in their natural properties," should be mixed together; as thus, "the processes of digestion and nutrition may be more conveniently and effectually promoted."

Mr. C. then says, that "when fermented liquors are good for the feeble, those which are well fermented, and which have little sugar or free acid, should be preferred:" and he particularly objects to the presence of acids in fermented liquors, especially for old persons.

Tables follow, showing the quantity of free acid contained in various fermented liquors, and in some fruits. Brewer's fresh table beer contains the least, then sherry, port, London draught porter, and Vidonia, in their order. Hence Rhenish wines, French wines, and cyder, are improper for the aged.

In his objections to acids, Mr. C. infers, that various eruptions, the gout, and rheumatism, are produced by their use.

Dining at mid-day is recommended, and tea is allowed. All vegetables which produce flatulency are said to be improper. Cayenne pepper should be eaten freely with vegetables.

Occasional variations in the different kinds of proper food is recommended; and especially, such as the season points out. Mr. C. even says, that he believes, one of the evils of riches is, that they enable the professor to set at nought the suggestions of the different seasons, in the choice of food; and that the artificial habit of using an unvarying diet, which this power affords, forms one "source of both hereditary disease, and of enfeebled progeny."

Excessive abstemiousness also is condemned: as is the cold bath for the aged. The tepid bath and warm clothing are, on the contrary, recommended; as also exercise, when it is taken voluntarily.

Cathartics and bleeding are then recommended, to obviate the evils of an improper diet; and cases are hinted at, where their use has arrested decay in the sight, and other chronic disorders of old age.

Many observations follow, on the various diseases which affect the head, the stomach, the bowels, the blood-vessels, and the liver, in consequence of improprieties of diet, and other erroneous habits of life; and Mr. C. concludes his work, by adding "a few remarks on the moral propriety of surgical operations on old persons." These principally turn on the caution with which a surgeon ought to decide on performing operations on the aged.

ART. 6. *On the present state of Medicine in England.*

IN the Medical and Physical Journal, No. 265, a long letter from DR. GRATTAN of Dublin, to MR. DICKINSON of London, is inserted, answering the observations which were made by the latter, on a pamphlet written on this subject some time ago, by the former.

The existing state of medical practice has been, for centuries, a fertile source of discussions amongst medical men; and of discussions too, which have, in their details, reflected but little credit on the combatants.

The rules and regulations by which the different classes of medical men have practiced their art, have always been, like other human institutions, defective; and this, because, as commonly happens, they have been formed piece-meal, and altered or added to, as the necessities of the times appeared to dictate.

In remote ages, Hippocrates, with all other physicians, practised every branch of the profession; medicine, surgery, and pharmacy; and, that they did so succecsfully, their writings will abundantly show. Time, however, produced changes as usual, until, at last, a division of the art into physicians, surgeons, and apothecaries, became, we believe, universal throughout Europe.

Whatever is, is right; and therefore many medical men have believed, and still believe, that this arbitrary division is correct and necessary; for that the art is too wide for a physician to understand surgery, a surgeon physic, or an apothecary either medicine or surgery. But when it is considered, that surgery was separated from physic only on account of surgeons being degraded by some popish superstition respecting the unholiness of shedding blood, and especially that the present race of general practitioners have, like the ancients, practised all the three branches with credit to themselves, to the art, and to the public, it is inconsistent to lay too much stress on the necessity for a separation between physic and surgery, which has been thus arbitrarily made, and is so incompletely acted on.*

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* The priests chiefly practised medicine; and surgery was separated from physic, first by a decree of Pope Boniface VI. at

The great contentions, however, have never been between the physician and surgeon, but between the former and the apothecary. The apothecary, many years ago, was a druggist; that is, he compounded and dispensed medicines; whilst the whole practise was in the hands of the physicians.

Physicians, however, found it convenient to entrust apothecaries with the administration of part of what they prescribed; and as thus, and by other means, apothecaries came in contact with the sick, the convenience of patients often called on the apothecary to prescribe, as well as dispense and administer medicine.

This was, of course, strenuously resisted, and medical libraries abound with controversial publications on these points; many of which are highly amusing, but too many of them are disgraceful to medicine, and its professors, on account of the ignorance and selfishness which they display.

Assuredly, apothecaries began to practise medicine, because the public convenience required it; for all opposition to it was perfectly unavailing; and a new race of practitioners gradually arose, which has now, for many years, been so numerous, that by far the largest portion of medical practice has fallen into their hands.

So complete was this change of apothecaries into a

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the close of the 13th century, and by a second by Pope Clement V. at Avignon, soon after the beginning of the 14th century. Excommunication formed the threatened punishment for this newly-created crime, the only ostensible excuse being the popish maxim, " Ecclesia abhorret a sanguine."

With due reverence for two such excellent and enlightened decrees, the University of Paris refused to admit any student into the faculty of medicine who did not abjure surgery.

species of physician, that, in time, the same public convenience required another alteration; and, a fourth class of medical men was formed, called Druggists, their duties being as nearly as possible the same, as those of the apothecary, before his conversion into another character.

The Druggists too, have begun to practise like their predecessors; and thus, a new war has broken out, exactly similar in its cause and object, to those which formerly raged so violently, the opposing parties being only the physician and apothecary in a new shape; namely, the general practitioner and the druggist.

This contest, however, differs from former ones in its mode of being carried on. The present general practitioners take a much more rational view of the matter than the former physician did; for whilst they feel and regret the encroachments made on their profits by the druggists, their endeavours are now principally directed towards obtaining such alterations in some anomalous circumstances in their situation, as would, if granted, at once establish the druggist, give themselves respectability, and therefore they believe materially benefit the public.

The fact is, that until the year 1815, the general practitioner, or rather the apothecary, was not known to the legislature as a practitioner of medicine, and therefore, as any body could practise physic, much evil arose to the public on account of the ignorance of many general practitioners. By the act of 1815, however, the apothecary was legally recognized, and restrictions were placed on their practice, so that a good medical education is required from those who enter into the profession.

But evils still exist. The apothecaries act, as it is called, only controuls those who practise medicine; surgery, and above all, midwifery, may still be practised by the most ignorant and ill educated even at the very door of the Royal College of Surgeons, for the college has no power except over its own members.

Moreover, the mode of remunerating the general practitioner is anomalous, and at once degrading to the medical man and injurious to the public.

The former apothecary was paid, of course, like the present druggist for the drugs which he dispensed; and unfortunately, this mode of payment continued after his claims became founded on another kind of merit, so that now he is obliged to put a large profit on the medicines which he prescribes, as the only means of repaying himself for the skill which he displays.

The general practitioner is therefore at present exceedingly anxious to complete the legislative enactment of 1815, by placing surgery and midwifery, as well as physic, under proper legal controul; and, at the same time, to establish the custom of receiving payment for the exercise of his medical abilities, in the form of a moderate fee, instead of by the odious detail of pills and draughts which he is at present obliged to enter into, in his accounts.

On the whole, the general practitioners are attempting to introduce this change by calm and dignified means, and we believe them to be actuated by a sincere desire to benefit their country by the changes which they wish to see adopted. They are seeking every opportunity of showing the evils which result from the present arrangements; of pointing out the deplorable ignorance of very many persons who now securely deal out death in the form of professional advice, and of otherwise obtaining their ends, by calling the attention of the legislature, and of the public, to the defects of the present system of medical and surgical practise.

With respect to the paper which has led to the above remarks, it is sufficient to say, that DR. GRATTAN is one of the very few physicians who now are advocates for apothecaries being kept to their pestles and mortar.

ART. 7. *On the use of Tar-vapour in Hooping-cough, and certain Forms of Inflammatory Disorder of the Lungs.*

IN the Medical Repository, No. 87. MR. WANSBROUGH, of Fulham, records three cases in which the breathing of the vapour of Barbadoes tar was followed by very beneficial effects. One is said to be a case of hooping-cough, one of inflammation of the lungs, and one, a case which manifested symptoms of asthma. They were really, however, all three cases of one and the same disease, viz. inflammation of that part of the respiratory mucous membrane which lines the bronchia or air tubes. The patients were all children.

Inflammation of this membrane, whether it arise from taking cold, or from the presence of hooping-cough, or scarlet fever, or measles, or from any other of the eruptive fevers of children, is cured naturally by the secretion* of a large quantity of phlegm or mucus by the ends of the arteries which terminate on that membrane.

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* Secretion is the process by which the terminating branches of the arteries form the different solid and fluid parts of the body. Every part of the body, hard as well as soft, is formed by secretion from the blood; although medical men commonly call those fluids only, secretions, which are separated from the body; such as bile, saliva, mucus, perspiration, milk, &c.

But if the patient have not the power to cough up this mucus, and it is very abundant, the bronchia become plugged up by it; and, as then, respiration cannot go on, death takes place.

The state of two out of Mr. W.'s three patients closely resembled this; and the tar-vapour was tried, on the idea of stimulating the air tubes, and thus producing an increased effort in coughing. The effect was perfectly answered, and apparently in both cases life was saved by the remedy.

One was his own child, three months old. Mr. W. says, "At length, worn out with fatigue and suffering, at the end of three days, the poor little sufferer refused the breast, and I then concluded, the termination of her distress, by a fatal issue, would, ere long, arrive." "The little creature seemed revived the instant she inhaled the vapour, and made an effort to cough. Delighted at the effect, I placed the vessel nearer to her nostrils, and continued the fume for about three minutes, when a cough intervened, followed by an immediate vomiting of viscid phlegm and mucus that nearly suffocated her! The relief, however, was complete, the child sucked, and went to sleep. The remedy was afterwards applied twice a-day for a week each time, at first, with the effect of producing a copious expectoration, attended by an immediate abatement of the symptoms.

Mr. W. produced the fumes, by putting a piece of iron almost red hot, into Barbadoes tar.

It is evident that this remedy is not applicable to the inflammatory stage of the disease, but is only useful when the bronchia are obstructed by mucus; at least, not in such cases as Mr. W. relates. But the vapour of tar has long been used as a remedy in certain cases of consumption; sometimes advantageously, sometimes not. In short, the cases in which it is useful have not been sufficiently investigated; and Mr. W.'s observations go far to show, that it is principally to the latter stages of bronchial diseases that it is applicable.

It may be remarked, that the vapour of tar is a celebrated popular remedy in some countries.

Art. 8. *Longevity.* Dr. Barnes, of Carlisle, describes the present state of Mr. Robert Bowman, of Irthington, in Cumberland, who, it seems, has completed the 115th year of his age.

Accounts like these are always interesting: indeed a knowledge of the causes which produce longevity are amongst the most desirable of human acquisitions; for although many of us complain of this vale of sorrows here below, we none of us like to leave it.

" This interesting old man, says Dr. B. enjoys exceeding good health, and is content and cheerful. He is of the middle stature, and says, when young, he was rather stout, and very strong;" he " was *always sober and regular in his conduct.*" " He married at the age of 50, and had six sons, all of whom are now living; the oldest is 59 years of age, and the youngest 47." " His chest is large, and his person well proportioned. Although the hand of time has at length laid him prostrate, *it has not yet made much impression on his constitution.* The texture of his body is not loose or emaciated, but firm and in embonpoint." His senses are perfect. He sleeps soundly in the night, and also frequently in the day. He has been confined to bed for six years past, yet he can move all his limbs; but he is not able to walk, except with the assistance of two persons." Six or seven years ago he walked sixteen miles, "with great ease," in one day. "Only seven years ago, he actually hedged, reaped corn, made hay, mounted stacks of corn and hay, and assisted in making them." "*He does not remember ever having been indisposed in his life, excepting twice;* the first time was, when very young, and then he had the measles; the second was not many years ago, when he had the hooping-cough." "He was then upwards of 100 years of age. He has occasionally met with severe accidents, but never had a medical attendant, and does not remember ever having taken a dose of medicine in his life." Weather never had any effect on him; he was never intoxicated but once, and then by a trick of his friends. He drank ale or spirits very seldom, and then only a single glass. "His common drink is water; his food milk, hasty-pudding, broth, bread, potatoes, an egg, a small piece of animal food, or any thing that the family are taking." His habits of eating, and drinking, and sleeping, were never regular. He often slept in the open air. "His pulse is 68 in a minute, regular and steady; no ossification of the arteries at the wrist can be discovered. His breathing is natural; and his voice, which is rather strong, appears to have undergone very little change." "*His mind has been seldom, if ever, affected by anxious care, restless ambition, or studious thought.* He has led the life of an industrious and laborious farmer. He has been temperate in all his pleasures, for which reason, they have been of long duration. He has never indulged to excess in sensual gratifications, nor committed any great irregularity. By him, exercise, temperance, and simplicity of diet, have been considered cardinal virtues." "One of his brothers died in 1810, aged 99 years," and two cousins lived to 95 and 85 respectively.

The true explanation of this fine old man's longevity is, that his constitution was excellent. The structure of the different parts of his body was perfect, and he has avoided all such causes as tend to derange the animal actions. Disease never preyed on his frame; mental anxiety was ever far away from him; he lived in the open air; he applied no hot and rebellious liquors to his blood; in short, his life proves, that where the organization of the body is perfect, and care be taken to avoid the causes which lead to its derangement, three score years and ten is not the natural term of human life; and that it is the wearing influence of irritation, and of slow disease, which destroys the body, and not time.

Let us all think of these things; for by acting in a similar way, the strongest of us may live long, and the weakest lengthen their terms of existence, and perhaps pass their lives in comfort, instead of suffering from the constant irritation of a painful disease. (Brewster's Edin. Journ.)

No. 3, of this Journal, will be published on May 1.

Want of room obliges us to omit the remainder of the miscellaneous matter.

A JOURNAL

OF

POPULAR MEDICINE.

No. III. MAY 1821. VOL. I.

Original Department.

OBSERVATIONS ON CHILDREN.

ESSAY THE THIRD.

Art 1. *On the Causes of Disease in Children, and on the Mode of its Production in the Poorer Classes.*

THE diseases of children may be advantageously arranged under two general heads; and this arrangement will principally follow, by considering, first, the difference of cause, and secondly, the varieties of form under which children's diseases appear.

The division, therefore, will be into such as are produced by the common causes of diseases in adults; namely, by cold, contagion, &c., and such as arise gradually, from the long continued application of a slight, but constantly acting irritation.

The first class comprises nearly all the acute inflammations, the acute contagious diseases, &c.; the second includes the chronic disorders, as well as several of the acute ones; the grand cause which produces this class of diseases, being some error in the physical or moral treatment of the child.

But this division, like all other divisions of diseases into classes, is not perfect; for the two classes are inseparably connected together, and run into each other imperceptibly. Thus, the production of almost every acute disease, is frequently dependant on a simultaneous action of both these causes. That is, a child shall be exposed to the action of such causes, as commonly produce fever: if its bodily health be perfect, it will probably resist the application, and pass through the ordeal unhurt; if, on the contrary, the actions of its constitution be imperfectly performed, on account of the presence of a low degree of chronic ailment, the cause of fever will produce its effect, and an attack of acute disease will follow.

So also, many of the worst cases of chronic disease in children, follow the recession of acute disorder, as of measles or other similar diseases.

And thus it is with all our artificial medical arrangements, whether nosological or otherwise. They are useful adjuncts in the study of our profession, but it is perhaps not sufficiently understood, that they are mere arbitrary forms, which have no real existence in nature; and therefore, forms into which we are obliged to force the different subjects which we wish to arrange, at some expence of truth, and consequently at some risk of inculcating erroneous ideas.

It will be convenient to discuss the causes of chronic diseases before those of acute ones; their action being more intelligible, and it being rather the object of these pages to elucidate the origin of chronic disorders, and the mode of preventing their occurrence, than to enter into details of the symptoms and treatment of acute diseases.

Every disorder, however slight it may be, must have a cause; and therefore, the most trifling ailment should receive its due share of attention: not openly, so that the child is made a party to the discussion, but from that silent, but anxious observation, which few perhaps, except parents, know how to habituate themselves to, and none but parents, or at least such as are constantly about a child, can carry into perfect execution.

The most simple case of disorder must of course occur to an infant; for his system is perfect. No part of it has yet undergone that slight, but very important process of disorganization of particular parts, which is so apt to be left, even after very slight attacks of disease; no peculiar cause of irritation exists in the infant's constitution, for it is not the time of teething, nor is the mind sufficiently developed, to allow much irritation to arrive through that channel; he is properly clothed and carefully attended to, and yet he is ill. As far as my observation has extended, this ailment has been produced by disorder of the digestive organs, and that disorder of the digestive organs, by the taking of improper food, and an inadequate exposure of the child to the open air. I cannot recollect that I have ever seen an infant, who had been fed solely on proper food, and had been properly attended to in other respects, attacked by the description of disorder to which allusion is now made.* Nature evidently intended, that an infant should be fed entirely on the milk of its mother; and where such is the case, I scarcely ever, I had almost said never, see disorder take place in infants.

It will be recollected, it is only intended now to speak of the chronic disorder of the digestive organs, to which infants are liable. Of course, if an infant be exposed to cold, it may be affected, as is stated below, by inflammation of the lungs, or any other acute disorder which is commonly produced by cold. Indeed, infants bear exposure to cold much worse even than older children;

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* There is an apparent exception to this rule. If the wet-nurse be ill, the bowels of the child will often be deranged in the way above described. But it is sufficiently evident, that in such cases, the nurse's milk is changed in quality by the existence of her own disorder, and it thereby becomes an improper food for the child.

whilst the latter are more susceptible of injury from that cause than adults are.

Are the young of animals subject to such disorders? never: and in like manner, my experience authorizes me, as far as it goes, to say, that the young of the human animal, is almost never disordered when treated in a similar manner. Exposure to cold indeed, improper clothing, and other more glaring errors in management, which are very seldom committed, because they are so glaring, will produce such disease occasionally; but not so frequently as may be imagined. The perfectly healthy body possesses a wonderful power of warding off the attacks of disease: and thus the causes of disorder are made to pass harmless over it; although they produce their effect, with much certainty, on such as are not protected in a similar manner.

The children of the poor, when found in different situations, illustrate this position in a very striking manner; and therefore it is thought right to begin the description of children's diseases, by showing how disorder arises in that class of persons.

Children living on a common are very seldom ill, and scarcely ever die. How does this arise? In the first place, they live almost hanging at the breast of the mother; in the next, from being almost constantly in a pure air, they acquire a robust state of health, which renders them proof against the attacks of common diseases.

It is convenient to the wife of a labourer to suckle her own child. She lives insulated from her neighbours, and has but little occasion to leave her house for even a short time. It is not so with the poor of large cities. In London, a very large proportion of all children, die before the age of two years.

This arises firstly, from the close and unhealthy situations in which they live; but principally from the improper diet on which they are fed. Women, in London, labour as well as men; they therefore have not time to attend to their infants, even if they had the inclination; and consequently, it becomes necessary, that infants should be fed as well as suckled.

The food given is almost always of an improper kind, and as women who work, think that gin is necessary to keep up their strength, gin is given liberally to their children. It is not wonderful then that they should die. Ill fed, improperly clothed, covered with dirt, and neglected in every possible way, they speedily fall victims to the consequences of a chronic disorder of the system; unless, as happens very frequently, indeed most commonly, in the cold season, they are cut off by inflammation of the lungs, or of the membrane which lines the windpipe and its branches, the air passages of the lungs.

One great peculiarity of children is, that their nervous system is more irritable than that of adults; it is more easily and violently acted on by causes of irritation: in proof of which, it may be sufficient to state, that slight derangements of the bowels will be sufficient to produce convulsions in certain children.

Such being the case, we find, that where improper food is given to a child immediately after its birth, its bowels speedily become disordered; sickness is produced, the abdomen is swelled by flatulence, the child's motions become unhealthy, and he is cross and troublesome.

It not unfrequently happens, under these circumstances, that an inflammatory diarrhœa occurs, and the infant is cut off in a very few hours from the attack. More generally, however, opium is given to sooth his irritable state; the constitution gets more disordered, the complexion becomes muddy, or pale, dark lines appear round the eyes and mouth, the folds of the joints and especially the skin of the abdomen become dark coloured and inelastic, the head enlarges, the belly is permanently tumid, the flesh wastes, the child sleeps with his eyes half open, he frowns and grinds his teeth, his cheeks are lighted up by a hectic flush, his glands swell, and he at last dies in a state of great emaciation, with the skin so loose, that it will wrap round his limbs, and his countenance expressive of the greatest distress, and bearing an accurate resemblance to the face of a much wrinkled, and very cross old man.

Death, by this process, is generally accomplished in about a year from birth; but the child is in imminent hazard during the whole of this period. His deranged constitution makes him particularly obnoxious to the attacks of acute diseases; or he is cut off by diarrhœa; or the time of teething brings with it convulsions and hydrocephalus; or the measles, the hooping cough, or the small pox occur and destroy him, under such circumstances, with unerring certainty.*

This is not an overcharged statement; most medical men can attest that the fact is so, and it is probable, that the theory of its production is correctly stated in the foregoing pages.

It is assumed that improper feeding is the main cause of the evil. Bad air, however, and an almost constant residence in the house, even in good air, are very powerful auxiliaries; but still improper feeding forms the most important circumstance, because the children of the rich who live in well ventilated rooms, and are in all respects well attended to, if they be fed improperly, become liable to the sad train of evils which is described above, although not in so great a proportion as in those of the poor. This leads however to an observation which will be more distinctly explained hereafter, that the children of the rich become delicate and disordered almost as much from being kept too much in the house, as from being fed improperly. Country children live almost entirely in the air: town children are out of doors but for a very short portion of the day, and this is so detrimental, that whilst the latter are very easily thrown into disease by improper modes of feeding, the former are enabled to take, without injury, a certain portion of other food, than that which nature intended them to live on.

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* It will be shown afterwards, that these diseases, under ordinary treatment, owe much of their danger to the previous unhealthy state of the child on which they fall. Healthy children recover from them very often without a bad symptom; puny children almost invariably die, unless they are treated with great judgment and activity. See the article on Measles, in No. 1, of this Journal.

Many children indeed pass through this fiery trial and escape death; but these children will not bear to be compared with the robust offspring of those who live in the country. They are generally unhealthy; so that the population of large towns is composed of smaller and more unhealthy people than that of the country, and it is amongst such children that all the varied forms of scrofula are to be found; that distortions of the limbs from rickets are so frequently to be met with, and that so many individuals exist, in whom previous diseases of the head have left behind them squinting, loss of the power of certain muscles, as of the eyelids or limbs generally, and idiotcy.

The difference of size in country and town-bred people was strikingly exemplified by the appearance of two regiments of volunteers, who were exercised together for some days during the last war, when the English people became at once a nation of defensive warriors. One regiment came from the Peak of Derbyshire, the other from the town of Derby; and whilst the latter was composed, generally speaking, of small pale-faced men, the Peak regiment was remarkable for the fine tall forms and ruddy complexions of the men which filled its ranks.

It has been said that the children of the rich are not exempt from these evils. I have repeatedly seen such children die under nearly all the circumstances above mentioned; of diarrhœa early in life, of marasmus or gradual decay, of convulsions at all periods, of hydrocephalus, and of the numerous diseases which accompany teething in children who have been improperly fed. But although these cases are much less numerous in the upper ranks of life than in the lower, yet still they so frequently occur, that the diseases of children form a very large proportion of every medical man's practice. Such children also occasionally die, but not in any thing like the same proportion, as amongst the lower orders of society.

In the next essay then, some account will be given of the mode in which the children of the higher classes become disordered, by showing how far the causes of the disease above stated are applicable to such children.

ART. 2. *On the Natural History and Medical use of the Leech: with some account of the Mode of managing Leeches, as well as of applying them, and Stopping the Bleeding from their Bites.*

1. OF THE DIFFERENT KINDS OF LEECHES.

THERE are many kinds of leeches, although very few of them are used in medicine: indeed, some of the species would seem not to have the power of piercing the human skin so as to draw blood; and in some of them at least, the mouth is peculiarly small, and the animal is not capable of taking hold of the skin, with so expansive a grasp, as we see in the common medicinal leech.

The Hirudo medicinalis or common leech, was the one usually employed for medical purposes in this country; but from the improvements in draining, and perhaps from leeches being used more frequently now than formerly, the English market is now principally supplied from abroad, and especially from France; the foreign leech being somewhat different in appearance from the true English leech, but equally useful as a medical agent. The hirudo troctina, as Dr. Johnson calls it, is however frequently used in medicine. The hirudo sanguisuga or horse leech, is not generally used, but we are ignorant for what reason.*

As these three are the only English species which are likely to be used in medicine, a tabular and comparative description of their distinctive marks shall be inserted.

	Upper Surface.	*Under Surface.*	*Where found.*
HIR. MEDICINALIS.	Depressed & blackish, with six longitudinal yellow lines, some say four, the two inner ones being interrupted by black spots.†	Ash coloured with yellow spots.	In marshes, pools, & ditches.
H. SANGUISUGA.	Elongated and of a brownish green colour.	Paler green with black spots.	Ditto.
H. TROCTINA.	Elongated and brown, with circular yellow lines and brown spots.	Yellowish green with a yellowish lateral margin and black spots.	In rivers, often adhering to fish.

Each of these species of leech has ten eyes, arranged in a semicircle over the top of the nose, the lowest eye on each side being further separated than the rest from each other. The other English leeches have eight eyes or less.

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* Dr. Duncan, in the Edinburgh Dispensatory, says, that the horse leech is often used and with advantage: indeed, as the only apparent peculiarity in the horse leech is that it is more voracious than the other kinds of leech, it ought to be the more valuable in practice, unless in cases where very small leeches are desirable.

† The number of these longitudinal lines is not material, for neither of the other species have any longitudinal lines. In the Hirudo Troctina they are transverse, and in the Sanguisuga there are neither transverse or longitudinal lines.

2. OF THE HABITS OF LEECHES.

The colour of leeches seem to be in some degree dependant on the soil in which they are found; but the spots and lines are permanent, and may be depended on as forming a distinctive character for the animal.

In winter, leeches live in deep water; but in summer they sun themselves in the shallows. In severe weather, and in summer when the pools are in danger of drying up, they bury themselves at a considerable depth in the soil, leaving a small hole which communicates with their subterranean abode.

Leeches appear above ground again in April, or at the end of March; but if the weather is cold or cloudy they confine themselves to the mud, as is also the case in rainy or windy weather, or when the water is agitated. "Just before a thunderstorm" says Dr. Johnson, "they commonly come up to the surface, and this the leech gatherers find a good time for collecting them."

As connected with the habits of leeches, it may be remarked that they make very good barometers. They remain motionless at the bottom of the vessel when the weather is about to be serene and pleasant: before rain they come to the surface of the water, and remain there till the return of fine weather; before high winds they will continue to move about the water with great swiftness;

before thunder and rain they will be found above the water and apparently agitated; before frost they remain at the bottom; whilst during snow or rain they are seen motionless in the neck of the vessel.

The fluids of animals form the proper food of leeches. The horse leech however is very voracious, and takes large quantities of solid food; such as worms, the larvæ of aquatic insects, &c. or, in short, any sort of animal food, and even the weaker of their own tribe if very hungry. They have been observed to eat all the flesh from the bones of frogs, lizards, fish, &c. Other leeches will equally destroy these animals, but they suck the blood only, without devouring the flesh.

In one case, a medicinal leech, which had been swallowed by a horse leech, was ejected alive after remaining in the stomach for three days. In other cases the swallowed leeches were found to be in a digested state; but digestion goes on very slowly even in the horse leech.

It seems to be an error to suppose that leeches when cut asunder, have the power of regenerating themselves. The pieces live for a long time, but they remain unchanged.

Leeches are hermaphrodites, but it is not yet determined whether they are oviparous or viviparous. Some authors think both. They are very long-lived; living perhaps for 20 years.

3. OF THE INTERNAL STRUCTURE OF LEECHES.

Leeches consist of about one hundred circular rings, and they possess the power of expanding the intermediate skin during the act of progression. Internally they are mainly formed of a series of cells or stomachs which communicate with the gullet, and are arranged on each side of the alimentary canal, and of the large nerve or blood-vessel. Below, these cells communicate with the intestine, which opens on the back of the animal near its last ring.*

There are also a series of oval bodies running down each side of this animal, and communicating with each other. These bodies are supposed to be glands, for the secretion of the slimy matter with which the leech is covered.

The mouth is armed by three sharp cartilaginous teeth, which meet at equal angles in a common centre, and form, when forced into the flesh by a repeated oscillatory motion, the radiated wound which is seen in leech bites. The teeth remain in the wound during the whole time of suction.

The true skin or cutis of the leech is covered by a cuticle or scarf-skin, which is shed about every four or five days.

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* Some authors say the leech has no natural termination of this kind; but other circumstances show that the anatomy of leeches is still very defective. The three teeth, according to some, are each formed of many small teeth, and it is probably so, the saw being the universal cutting instrument.

4. ON THE MODE OF APPLYING LEECHES.

To apply leeches successfully, it is essential that the patient's skin be perfectly clean and soft; and as commonly a lotion has been used to the part before the leeches are employed, considerable attention is often required before this can be washed entirely off.

Hot water with soap must first be used, until the part is clean, and then the soap must be carefully removed by means of pure water.

When the skin is in this state, leeches will bite very readily when they are fresh and hungry. The best mode of applying them is to let the leech crawl on a dry piece of linen for a little time; or better, if it have been kept in a vessel without water for some time beforehand, then to take it in a bit of soft linen between the thumb and finger, and when it projects its pointed mouth from between the folds of the linen, to direct it to the spot intended for it to act on.

In this way the leech will generally fasten at the first touch, and it will at all events fasten more readily, since it is prevented from covering the skin with slime, and thus sheathing it from its own bite and that of other leeches.

The most skilful appliers of leeches use this method, and they gain celebrity by thus throwing them on the part, as some of them express it.

Another way is to put the leeches into a wine glass or pill-box, and then to invert the glass or box on the proper part. This method does not answer when the leeches are not lively, for they will fix on the sides of the vessel, so as not to be again made to touch the skin.

This difficulty may generally be obviated by putting more leeches into the vessel or vessels than are wished to be applied, and removing them when the proper number have adhered.

In cases of difficulty, it is often advantageous to cover the part with cream or milk ; or better, to touch the head of the leech with a drop of vinegar; or to make small incisions in the skin, (of the operator perhaps, if the patient be a sleeping child,) by means of a lancet; or, if one leech have adhered, to take it off again, and use the blood, to entice others to do likewise.

Mr. Thomson says, in the London Dispensatory, that a leech may certainly be made to bite on any assigned spot, by putting it into a quill which is open at both ends, and after placing the end containing the leech's head on the part, stopping up the other end by means of the finger. This information is valuable, at least if the plan prove generally successful, in cases where leeches are required close to an important part, as near the eye, or on the gums, &c. ; but it is to be feared that the quill would be as likely to fail as the common leech-glass, both being used on the same principle, and the latter being confessedly an ineffective instrument.

The pain of biting generally ceases in a short time after the leech has adhered; but if the patient be so placed as that the leech hangs as it were from the point of adhesion, the pain is in some individuals increased and continues till the leech falls off.

Leeches should not remain on the part for more than ten or fifteen minutes; if they do not then fall off, it will be found they have been sluggish and are not full, and the same thing will be shewn by the want of that vermicular motion on the neck of the leech, which is so perceptible when it draws vigorously. In these cases, it may often be made more active by touching its head with vinegar.

As it sometimes happens that leeches when indolent, will thus remain on the part for hours, it is better to remove them if they are indisposed to suck. This may be done by the application of a very little salt to their heads, and as the after-bleeding is generally more advantageous than the drawing of the leech itself, very little loss is sustained by removing them before they are filled with blood.*

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* According to one gentleman's experiments, the largest leech is not more than a drachm heavier when full, than before application. If so, small ones cannot draw away more than half a tea spoonful of blood.

5. THE TREATMENT OF LEECHES AFTER THEIR REMOVAL FROM THE SKIN.

Great waste is occasioned by unskilfulness in attending to leeches after they fall of. By proper care, they may be made to act again and again; for, when it is considered that blood is the natural food of the leech, it must follow, that some fault in our treatment causes their death, and not their having made a hearty meal on food that is natural to them.

It may happen indeed, that the blood in certain states of disease, acts as a poison and destroys them; many persons having stated that they fall off dead, in some cases, before any application is made to them: but this is at least problematical, and perhaps unlikely.

The common practice of covering them with salt is almost always destructive; and, even by sprinkling a small quantity on their bodies, if death do not follow, it generally happens that the leech is blistered by the salt, and made incapable of acting again for a considerable time.

Squeezing out the blood is better than the application of salt in any form; but the best mode is to touch them with vinegar, which, if sparingly applied, will make them vomit, so that they may be re-applied again immediately, even to the third or fourth time, or, by returning them into clean water, be ready for another occasion.

When leeches are treated in this way, and especially if they be allowed to keep perhaps a fourth part of the blood which they have swallowed, they are not only capable of acting repeatedly, but in skilful hands may be made to grow to an immense size.

Under one gentleman's care, a set of leeches were in this way preserved for a great length of time, and at last they grew to the length of nearly eight inches. It was want of care that destroyed them even after all this. These leeches were not once emptied of their blood, and yet they often were used again at an interval of only a few days.

It is an erroneous idea to suppose that leeches die if they be not emptied of their blood; the only inconvenience of permitting them to retain it all is, that they then remain inactive, and incapable of being used for a longer time than if treated differently.

6. THE MODE OF ENCOURAGING THE BLEEDING AFTER THE LEECHES HAVE FALLEN OFF.

This is generally done by covering the bites with sponge or cloths wrung out of warm water. In many cases this is a very good plan, because it subjects the part to a useful kind of emollient fomentation; as when the leeches are applied for local external inflammations, such as of joints or other parts, or to tumours.

In other cases however, this fomentation is not so useful; as when leeches are applied to the head for the head ache, or for the hydrocephalus of children. On such occasions it is a good plan to bind a napkin round the bleeding part, and change it as often as it may be necessary; or in hydrocephalus, to resume the use of any cold application to the head, which will generally form part of the treatment.

It is true, that by so doing, the bleeding is sooner stopped; but this difficulty is obviated by applying more leeches in the first instance, which will secure the proper quantity of blood being drawn, and at less trouble to the patient. The difficulty of stopping the bleeding of leeches forms no objection to this plan, because with very moderate attention the bites of leeches may always be commanded.

Another method of encouraging the bleeding of leeches, is to apply a warm bread and water poultice over the bites, and change it once in about five minutes. This answers very well, if care be taken not to apply the poultice too hot; for it often happens, that the bleeding of leeches is in this way prematurely arrested.

When it is desirable to take away as much blood as possible, and the part will admit of it, a cupping glass applied over the leech-bites will increase the bleeding very much. Of course, this plan is not applicable when the leeches are used for external inflammations; indeed, in such cases, leeches are particularly valuable, because cupping cannot be resorted to.

7. THE MODE OF STOPPING THE BLEEDING OF LEECH-BITES.

This section forms an important branch of the present enquiry. The bleeding of leech-bites is very uncertain, the orifices often closing soon after the leeches have fallen off, so that but little blood is obtained; whilst they will as often continue to bleed most profusely for many hours, and in this way, either endanger the life of the child, to whom it generally occurs, or reduce him to a state of great weakness.

On more occasions than one the writer has seen this happen, and cases are recorded, in which death has followed the application of even a limited number of leeches.

Medical men generally calculate on the continuance of bleeding for three or four hours; but they are often sent for in a great hurry to calm the apprehensions of a patient's friends, by closing the oozing orifices. These apprehensions are generally unfounded; but, in almost all cases, it is found, that from ignorance of the proper mode of stopping the bleeding, the nursery is a scene of confusion and helpless terror

Practitioners often smile on these occasions, in wonder that it should not sometimes occur to an unprofessional person, that a finger placed on each of the leech bites will command the bleeding for as long a time as it is held there; and that thus all apprehension may be, in every instance, calmed in a moment. But no, the fright of the moment takes away all reasoning power, the child is covered by bundles of cloths or a mass of flour, or hat fur, or other similar substances, from under which the blood issues in defiance of means so inefficient.

Neither hair-powder, nor flour, nor the fur of hats, nor other applications of that kind, will be of the least avail, where the bleeding is so violent as to require to be restrained by artificial means. There are, however, numerous modes of restraining hæmorrhage from leech bites, several of which are at the command of every one.

A finger placed on the orifice, commands the bleeding as is stated above; but as the blood in drying, glues it to the skin, the bleeding generally recurs, on account of the violence necessary in removing the finger; or it is inconvenient to hold it there long enough, permanently to close the orifice in the bleeding vessel.

It is easy to turn this glueing property of the blood to good account. A lady had a leech bite on her temple, which bled profusely, in spite of the skilful application of caustic, which is in almost every case, effectual. A bit of rag, half an inch square was placed on the leech-bite, care being taken, that the part was, at the moment, as free from blood as possible. This bit of linen was held on by the finger. In about five minutes, it was found, that the blood had glued the linen to the part, and as sufficient blood had not been allowed to collect underneath, to wet the linen through, and thus fasten the finger to the linen, the former was removed, the linen remained, and the bleeding did not return.

This method has been repeatedly used successfully since that time; and it seems, that Mr. Abernethy teaches his pupils to stop the bleeding of leeches in the same way. Mr. A. uses lint instead of linen; this is an improvement, for as the lint is thicker than the linen, it is almost impossible for the finger to be glued to the former; thus obviating the only cause of failure, in restraining the bleeding of leeches by this mode.

The application of lunar caustic is a very effectual mode of arresting the bleeding of leeches; but it requires to be used with great care, otherwise an unseemly mark will be left behind, and the surrounding parts will be injured by the spreading of the caustic to them. The piece of caustic should be tied in a quill, and sharpened to a fine point, by rubbing it on a rough sand-stone. The point is then to be introduced into each orifice, and held there for about five seconds.

The application may be repeated if necessary. A black scab is formed, which falls off in a day or two.

Even vinegar, when applied to the wounds, will often be sufficient to stop the bleeding; but the aromatic Thieve's vinegar, will be effectual in almost every instance. This latter plan, however, should not be resorted to, unless the others, above recommended, fail; for it gives pain, and requires care in the application. The best way is, to take up as small a part of a drop as possible, on the point of a blunt stocking-needle, and insert the point thus armed into each orifice.

A needle's point may also be used in the same way, when armed, by dipping it, wet, in a little powdered lunar caustic.

Powdered alum will often answer very well; and powdered emetic tartar very certainly.

Another plan still remains, which although it will never fail, *need* not be resorted to in any case. Heat the pointed end of a small needle by holding it in the flame of a candle, and bend it into a small semi-circle. Pass this through the bleeding orifice, and wrap thread round it, as is done round the pin which is used to secure the vein when horses are bled.

It will perhaps be useful to add, that leech-bites cease to bleed naturally, by the extravasation of blood under the skin, which, by coagulating, closes the orifice in the bleeding vessel.

It is not known, why these bites bleed so very much more copiously, than similar wounds made in any other way. The question is a very curious one.

8. THE BEST SITUATIONS ON WHICH TO APPLY LEECHES.

It is commonly recommended, that leeches should be applied on such parts only, as have a bone underneath them, and will therefore allow of a more decided pressure being made afterwards; but there is no part, however soft, in which the bleeding may not be restrained, as is shown above, with great ease.

In children, the head, the throat, and the chest, are the parts on which leeches are commonly applied; for, the uninjured constitution of children are seldom affected by external, local inflammations, for which leeches are so often required in adults; their complaints being generally of the class of acute inflammatory disorders, such as water in the head, inflamed eyes, and inflammation of the bronchial membrane, or lungs, or of the windpipe and adjacent parts.

Their use, however, is becoming more general in the bowel-affections of children; it being now ascertained, that many of these complaints are intimately connected with a state of inflammation of the mucous membrane, which lines the bowels.

When applied for general affections of the head, it is immaterial, whether they be placed on one side or the other, on the temples or behind the ears; and as in all these diseases, exposure of the head to the external air is recommended on other grounds, the after-bleeding may be encouraged by the application of linen wrung out of warm water. But in inflammation of the windpipe, or chest, or abdomen, as exposure of the skin to cold is very detrimental, it is always better to apply more leeches than are absolutely required, and to be content with absorbing the blood as it flows, by means of pieces of dry linen.

But if this plan be adopted, great care is required, that the bleeding be not carried too far. The part must be very frequently examined, and if the child become pale or faint, the orifices must be closed immediately.

In adults, leeches may be applied on almost every part. They are often used for head-ache, and the general direction is to put so many on each temple. They may as well all be placed on one side, and the trouble is infinitely less if it be so done. It is commonly more convenient to place them behind the ear, and that part is quite as good as the temples or forehead. It is indeed better; for, in certain constitutions, leech-bites occasion an unpleasant swelling and erysipelatous inflammation of the skin, and as this produces a very unsightly appearance, when it affects the skin round the eyes, it would often be avoided, if leeches were applied behind the ears, instead of on the temples.

Many practitioners are accustomed to place leeches even on the edges of the eye-lids; and certainly often with impunity. But, in one such case, each of the bites formed an abscess; and, as there were several of them, they united together, and formed one large abscess round the lower eye-lid, which was long in healing.

The French too, are in the habit of applying leeches, even on the inside of the lower eye-lid; and doubtless, were it certain that the evil above-mentioned would not occur, the practice would be exceedingly efficacious. The writer has not tried it, but as the chance of evil is small, and the advantage great, he would not neglect it in a severe case, especially as the French author states, that the leeches scarcely leave any mark on the bitten part; seeming rather to prove, that the great cause of erysipelas following leech-bites is the skin, that tissue of nerves and other irritable parts, being acted on by the bite, more easily than other less irritable structures would be.

9. THE BAD EFFECTS WHICH FOLLOW THE APPLICATION OF LEECHES.

The erysipelas above-mentioned forms the chief external bad consequence of using leeches: and it is often very distressing to the patient, especially when it occurs, as it chiefly does, on the head. The eyes are often closed by the effusion of limpid fluid into the loose cellular membrane, which forms the eye-lids, whilst the skin below the eyes is black from effused blood, just as in the case of a bruise to any other part of the body. In one gentleman, the application of leeches invariably produced severe erysipelas.

The mode of treating this affection must depend on the state of the patient's constitution; for it is always produced by the habit being predisposed to be thus irritated and not by any thing noxious in the particular leeches employed. Generally speaking, time only is required to dissipate these unpleasant appearances; but lotions containing vinegar are perhaps more efficacious in removing effused blood from under the skin, than any other application. These lotions may be applied by means of folds of linen, and may be advantageously used hot, especially in the last stages, after the swelling has begun to subside.

In some cases, and especially in children, the loss of a small quantity of blood by leeches produces fainting, seemingly a much smaller quantity than would produce the same effect if taken away in any other manner.

In these cases the bleeding must be stopped, and the same treatment adopted as in fainting from any other cause; viz. the horizontal position should be enjoined, and cold water applied to the face and hands, with hartshorn, &c. to the nose, and warm fluids by the mouth.

10. THE KIND OF LEECHES BEST ADAPTED FOR DIFFERENT PURPOSES.

Small leeches, on the whole, bite better than large ones; and as the skins of children bleed more freely than those of adults, the smallest leeches should be chosen for their use, an increase in the number applied being always a sufficient remedy for the scantiness of the after bleeding.

The largest leeches however should be applied whenever there is only an opportunity of using a single leech, and a large bleeding is desirable.

11. DISEASES OF LEECHES.

Leeches are very liable to become diseased and die. In summer it often happens that great numbers perish in a short time, and it is not accurately known from what cause this happens: some say, from the water at that season speedily becoming putrid; but others affirm, from direct experiment, that the water in which leeches live, is, as it were, preserved from putrefaction, for they have found, that portions of it have continued sweet for months, although leeches have constantly resided in it. In one case the experiment was continued for two years; at which period, the single leech employed died, but the water had not acquired an unpleasant smell. The sides of the vessel become coated by a greenish matter, but the water continues to be "pure, sparkling, and free from smell."

A healthy leech should feel hard when handled, from its power of contracting itself being perfect and energetic. If it be soft in the hand, the other signs of disease should be sought for.

These signs will generally be found to indicate one or other of the following diseases.

1. "An ulcer seated on various parts of the body, but more generally affecting the side. The part on which it is situated is usually contracted.

When this disease first manifests itself, it presents only a small speck, which, in the course of a few days, spreads with such rapidity and malignity as to destroy life. This ulcer is frequently tinged with blood, and occasionally works a passage internally. Sometimes it is of little or no depth, and of no extent, appearing to be a simple abrasion of the skin. Trifling, however, as this may seem, it proves, as many must have witnessed, abundantly destructive.

2. Another disease, of equal malignity, is, when one portion of the body is narrowed in its diameter, and rigid, whilst another portion is studded with tumours, which, on incision, present nothing except black, putrid, coagulated blood.

3. A disease that occasionally falls under our notice, and in its pernicious tendency equals those already described, is, when the whole body puts on a flaccid appearance, with the exception of the lips, which are hard, swollen, of a purple cast, and frequently bloody." (Dr. Johnson, p. 133.)

It seems that leeches are often caught with these diseases on them, especially the ulcer, on the hirudo vulgaris, (a useless species, often palmed on inexperienced buyers for the medicinal leech,) in the summer.

A great mortality, says Dr. J. may always be expected when the water "assumes a bloody tinge," though the leeches are apparently in good health.

The remedy for these diseases is a desideratum.

12. ON THE BEST MODE OF KEEPING LEECHES.

A large brown stone jar with the inside somewhat rough, is the best vessel for this purpose, much better than a glass vessel. It should be two thirds filled with soft water and be covered by a coarse cloth.

Dr. Johnson says, "When leeches are kept in any considerable quantity, I would recommend them to be placed in a large vessel, provided with a false bottom, so perforated, as to allow them a ready passage. This false bottom should be raised from three to six inches above the real bottom, or to such an extent as will admit of a turf of nearly equal dimensions being placed between them. It should fit closely to the sides, so that the earth may not be disturbed by the introduction of fresh water. It is necessary that the vessel be also furnished with a stop-cock, that the water may be drawn off as often as it may be considered expedient."

In any case it is advantageous to put a portion of moss, or as the leech dealers often do, of the marsh horsetail or equisetum palustre into the jar, as it is of great use in cleansing the cuticular covering which they periodically throw off.

The water should be changed at least as often as it becomes foul or bloody; and, as it is erring on the safe side to let the leeches have a constant supply of fresh soft water, the water should be changed, and the inside of the jar cleared of the slime which adheres to it every two or three days, or daily in summer.

It only remains to observe, that as it is not always easy to procure a supply of leeches in the country, it would often be of service, and especially to the individual employed, to teach some female how to manage and apply leeches. By so doing, the application would always be effectual, and as the lives of the leeches would generally be preserved, the cost of the application would be less than if the leeches were bought and wasted as is usually the case.

Women thus qualified, are even now found in large towns, but the number of them might be advantageously increased; for it is a great convenience to know, that leeches can thus always be obtained and properly applied, and it forms an honest and useful mode of gaining a livelihood for those who engage in it.

Miscellaneous Department.

This portion of our Journal will consist of Critical Analyses of New Publications, and a Digest of such parts of the Medical and Scientific Literature of the Day, as may either afford interesting information to our Readers, or allow room for useful remarks on our own parts.

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ART. 3. REVIEW of

THE LIFE-PRESERVING MANUAL, *comprising all the Means most proper to be instantly adopted, with a View to Preserve Life, Restore Animation, Lessen the Danger, or Alleviate the Sufferings in every Case of Accident, Injury, and Sudden Illness, to which the Human Frame is liable: with Instructions and Cautions, calculated to Prevent the Occurrence of the Most Frequent and Fatal Accidents.* By S. G. WILKS, M.D. London, Simpkin and Marshall, 1820.

THIS title page is alluring, and perhaps somewhat too long to be properly answered by a foolscap octavo, of fifty-seven pages. It may be too, that the directions given, are not enriched by all the suggestions which modern science has given birth to, in the treatment of several of the accidents alluded to. However, there is more than enough of good matter, for us to extract such portions of useful information, as will, at once, add to the value of our own pages, and introduce those of Dr. Wilks favourably to our readers.

The first causes of accidental death, mentioned by

Dr. W., are drowning, hanging, smothering under bedclothes, choaking by substances in the throat, and suffocation by noxious vapours.

We shall separate the consideration of these accidents, from that of the rest; because, in the treatment of drowned persons, we find the author's full directions for inflating the lungs, and for other modes of practice, which apply in almost an equal degree to the whole of them.

This will be understood, on recollecting, that the great and ostensible cause of death, in such accidents, is obstruction to the performance of respiration. One great object therefore, of the treatment, is to reproduce the respiratory process, and the mode of doing this is similar in all of them.

But before entering on these details, the author touches on a very important subject; one which has lately received much attention from a clergyman, whose name is Whiter, in his book on "The Disorder of Death," as he somewhat obscurely expresses it. This subject is, whether or not we are in possession of any certain mode of knowing when a person is dead.

It would seem we have not, and Dr. Wilks states this fact expressly, for the purpose of earnestly recommending a long-continued perseverance in the means of resuscitation, in all cases of accident; least we should unwarily consign those to the grave, whose bodies might have been raised up again to life and happiness, if proper plans had been pursued for a sufficient length of time.

The subject is an exceedingly important one; and although we are not yet perhaps sufficiently well acquainted with the changes in the corporeal frame, which lead to death, for us to decide, either that our present modes of resuscitation are no longer applicable to an individual case, or that some more effectual treatment, may not be discovered by the further increase of our knowledge, yet we can, at least, see good reason for believing, that there must be much more chance of our being able to recover a person, who has been suddenly cut off in health by an accident, which has only interfered with the actions of the body, without destroying any part of its structure, than in cases of death from the ravages of a wasting disease, or by such violent means as evidently produce their effect, by destroying the organization of some part of the body.

Hence, as in drowning, hanging, or suffocation of any kind, death is produced only from the action of respiration being suspended, our efforts at reanimation should be continued for a much longer time, than where death has followed the action of poison, or a blow on the head, &c.

" Respiration," says our author, " may be, for some time, suspended, and the ordinary and external signs of death may have ensued, and yet the vital spark may not be entirely extinguished." Again, " though every organ of the human frame may have long ceased to act, yet if the lungs retain sufficient sensibility to be stimulated by any means, into a renewal of their important functions, the spark of life remains unextinguished, and may be rekindled into a full and efficient flame. In all cases, therefore, of sudden apparent death, the inflation of the lungs by artificial means, at once affords the most decisive test of vitality, and the most hopeful means of resuscitation that can be employed. Unless some violent injury has been received, or the regular gradation of some fatal disease has preceded, no human being should be consigned to the mansions of the dead, until this test has been tried."

We shall now extract some of Dr. W's directions.

Drowning. Wrap the body up in warm garments, and carry it quickly in a cart, or otherwise, to the nearest house, raising the head somewhat. Lay the body down on a low table, exposed to the warm sun, or to a fire; permit no more than six or eight persons to be in the room; divide them into two parties, the one to be employed in inflating the lungs, and the other in communicating external heat to the body.

To Inflate the Lungs. Let one assistant stand at the head of the body, and introduce a conical tube of wood or card, bent and tied round with string, into one of the nostrils; hold it there with his right hand, and close the other nostril and mouth with his left.

Let a second person stand on the left side, and blow air through the tube by a pair of bellows, if possible, or by means of his own mouth. Let him do this until the chest of the body is raised up, or distended by the inflation.

Let a third stand on the right side, and press the upper part of the windpipe backwards with his left hand, his right being spread out on the breast. His object is to prevent the air from passing down the gullet, into the stomach. The gullet is directly behind the windpipe, and it may be forced against the back bone, if pressure be made on the windpipe.

When the lungs are filled with air, the first assistant must unstop the mouth, and the third expel the air again, by pressing moderately on the chest.

This series of operations must be repeated again and again, and persisted in "for many hours," if signs of life do not appear. As a preliminary, it will often be necessary to hook up all phlegm from the throat, by introducing the finger through the mouth.

To Communicate External Heat to the Body, large woollen cloths, wrung out of hot water are recommended, renewing them when cold; also diligently rubbing the body by means of heated cloths; the application too of bags of warm grains or sand, bottles or bladders of hot water, or hot bricks, the two latter wrapped up in flannel, to the feet, hands and arm-pits.

If vitality return, or appear likely to do so, hartshorn and oil may be used in friction; as also salt.

A glyster of warm water, with the addition of "two table spoonfuls of spirits of hartshorn, a heaped tea-spoonful of strong mustard, or a table-spoonful of essence of peppermint; in defect of these ingredients, half a gill of brandy, rum, or gin, may be substituted, or the warm water may be given alone."

Similar mixtures may be thrown into the stomach, by means of a syringe; but of not more than a quarter the strength.

The inside of the nostrils too, may be touched by hartshorn, or other stimulating fluids, or snuff may be given.

Electricity, or galvanism, is also recommended.

When the patient can swallow, he must be put into a warm bed, with his head and shoulders raised; and warm and moderately nourishing drink be given to him.

Patients are liable to indisposition; especially to inflammation of the chest, and pains in the head, after such accidents.

Directions for Avoiding Drowning. Keep the hands under water, and use the legs as if in walking up stairs. In this way, it is said, that any person may keep above water.

If a person cannot swim, he may go into the water to save a drowning man by doing as follows.

"Spread a handkerchief on the ground, and place a hat with the brim downwards, on the middle of the handkerchief, and then tie the handkerchief round the hat as you would a bundle, keeping the knots as near as possible in the centre of the crown. Then seize the knots in the hand, and keeping the opening of the hat upwards, fearlessly plunge in; and having the other hand at liberty, carry out a rope, stick, or use any other means, which assist in rescuing the drowning man from his perilous situation."

In rescuing a person from drowning, seize him by the arm, between the shoulder and the elbow.

HANGING. In addition to the above, Dr. W. recommends, that blood should be taken from the neck by cupping glasses, or by opening the jugular vein.

When a child is SMOTHERED UNDER THE BED-CLOTHES, it often happens that the body is hotter than is natural. Cold water is, in such a case, to be dashed over the skin The lungs must then be inflated as in drowning.

SUFFOCATION *from Substances sticking in the Throat.*

If the substance have not descended low in the throat, it may often be hooked up by means of the finger.

If lower, "fasten a small piece of dry sponge, or tough meat, to a fine silk, or linen tape, and put it in the throat, holding the tape firmly in one hand. Let the patient then swallow a little warm milk, or water, so that the sponge, or meat, may pass into the gullet along with the fluid. As soon as this has taken place, withdraw the sponge by pulling the tape gradually, and it will most probably bring the substance along with it."

Or, a double iron wire may be made into a small blunt hook, with which the substance may often be extracted

In some cases, where these remedies fail, an emetic is recommended, or if the patient cannot swallow, tickling his throat with a feather.

As, by this time, a medical man will probably have been procured, he will, in some extreme cases, make an opening, for the purpose of extracting the substance; or in others, he will excite vomiting, by throwing some stimulating matter into the veins.

SUFFOCATION *from Noxious Vapours.*

Make it a rule never to go into a well, or deep cellar, or large brewing vessels, or any close place under-ground, without first letting down a lighted candle into it. If the candle burn, there is not sufficient carbonic acid gas, or other noxious vapour present, to endanger life.

Where accidents have happened, Dr. W. recommends the same treatment as in hanging.

INJURY FROM LIGHTNING.

To avoid this, if in a house, the best situation is said to be on an old chair, or stool, placed on a mattress, or bed, in *the middle of a room*, as far as possible from iron, or from gilt frames, or other kinds of metal. A good situation would be in a cot, suspended in the centre of the room, or in the middle of a cellar.

If in the open air, Dr. W. recommends a person to go, within 15 or 20 feet of the outer branches of the highest tree in the neighbourhood, and the wetter the clothes are, the better.

The treatment recommended, is the same as in the preceding case.

INTOXICATION.

Bleeding from the neck, and the means above described, (p. 136,) for producing sickness, form the proposed remedies.

SUDDEN DEATH *from any Cause.*

In all such cases, Dr. W. recommends, with great propriety, that the above means of resuscitation should be diligently employed, and the body, on no account be buried, until putrefaction have unequivocally manifested itself.

We have extracted so liberally from this publication, that we cannot enter on the sections on poisons; but the directions given are not very good, and we shall very soon take up the subject of poisons in a regular way.

In cases of *stinging by a gnat, wasp, or bee*, a slice of onion with salt, or vinegar, rubbed on the part, is recommended; and a tea-spoonful of salt to be taken if a wasp have been swallowed.

If the Clothes catch Fire, lie down at full length on the floor, and roll to the hearth rug, or to the green cloth on the table. Wrap either of them tight round the part of the dress which is on fire. The theory is, to prevent the flame from spreading upwards by lying down, and to extinguish it by depriving it of air; and this is done by wrapping any thick woollen substance round the burning body. In the mean time, a by-stander may fetch water, and wet the outside of the woollen cloth with it.

To escape from a burning room, full of smoke and flame, creep along the floor with the face to the ground.

IN ACCIDENTS FROM COLD, the application of warmth, and of stimulating food, or drink, should be very gradual; and in severer cases, the resuscitating treatment, as in cases of drowning, is said to be proper.

In Cases of DRINKING *too much* COLD WATER *in* HOT WEATHER, hot spirits and water, with or without sixty drops of laudanum, are recommended.

The treatment of wounds, sprains, bruises, &c., concludes the volume; this we shall ourselves describe hereafter, especially as the details given here, are not as satisfactory as could be wished.

ART. 4. *Dr. Jenner on Vaccination.*

Dr. J. has addressed a letter to the medical profession, for the purpose of again calling their attention to the fact of the vaccine pustule being rendered imperfect by the presence of eruptions on the skin of the child. Dr. J. stated this fact long ago; but he now repeats his statement on account of the numerous cases of incomplete success in vaccination, which have lately occurred.

He says, "A single serous blotch on the skin, existing during the progress of the vaccine vesicles on the arms, may occasion such irregularity and deviation from correctness, that vaccination, under such circumstances, cannot be perfectly depended on."

He says also "I have found abrasions of the cuticle to produce the same effect; such, for example, as we find in the nurseries of the opulent, as well as the cottages of the poor, behind the ears and upon many other parts where the cuticle is thin. Happily we find no irregularity in the vaccine vesicle in an uncontamined skin; but we find it if the skin is beset with these herpetic blotches, or even simple serous oozings from an abraded cuticle. It is not to be considered as of less consequence when occupying a small space; a speck behind the ear, which might be covered by a split-pea, being capable of disordering the vaccine vesicle. Damdriffe may be considered as a malady of this class, the incrustation on the scalp being formed from excoriation beneath; and however slight, for there is every gradation between a thin scurfy layer of a dirt-looking substance, or even patches of this thin crust and tinea (or scald-head) itself. However, fortunately for the safety of the vaccine practice, and fortunately too for the ease of the practitioner, all these affections of the skin may be removed with very little trouble. Sore eyelids are also impediments to constitutional vaccination."

Dr. J. then states that similar deleterious results are produced by the shingles or other herpetic eruptions being present during vaccination, and his opinion that the vaccine disorder loses its anti-variolous powers in proportion as these eruptions are more or less inveterate. But he further says, that if the vaccine pustule be perfect, the constitution is secure; and moreover, that when in such herpetic cases, the pustule is perfect,

"The herpetic blotches or vesicles, of whatever kind they may be, often assume (sometimes as early as the 3rd or 4th day after the insertion of the vaccine fluid) a new character, not unlike the vaccine, and keeping pace in their progress with the vesicles on the arm, die away with them, leaving the skin smooth."

Dr. J. concludes thus—"Let me advise every practitioner not to confine his cautions, nor to narrow my meaning to one class of eruptive affections. In short, every disease of the skin, which may be called serous, or one which sends out a fluid capable of conversion into a scab, has the power of exerting this modifying and counteracting principle; and I have also seen purulent fluids exert a similar influence in producing deviations. If I was asked, what were the other impediments to perfect vaccination, as a general answer I should say, that I scarcely know any other except spurious matter, or impediments too obvious to require my naming them here such as deranging the vaccine vesicle in its progress, by incautiously robbing it of its contents, or producing a new action by external violence."

Art. 5. *Spontaneous Combustion of Two Females.*

Dr. Charpentier, a French physician, describes the case of two females who were found reduced to ashes on a bed at Nevers, under circumstances, which favor the idea of the combustion of one or both of them having been spontaneous.

Many of our readers are aware, that several cases are on record, of persons, generally females, who have taken spirituous liquors to excess, having been burned to death and literally turned into ashes, in situations where the application of fire by external means was very improbable; and, what is more extraordinary, where the furniture and other matters near the body have been untouched by the fire, although the body has been wholly consumed.

An idea has prevailed, that these persons have been destroyed by a spontaneous combustion of their bodies, produced, as is supposed, from the animal structure having become as it were inflammable, from habitual inebriation.

It is almost impossible to avoid smiling at such an idea; but we ought not to carry our scepticism too far in any case; and, although Solomon said, there is nothing new under the sun, we may safely add, that the sun shines on many things which we have not seen, and that the truth of Hamlet's slur on Horatio's philosophy is exemplified every day.

At all events, M. Charpentier's case is an interesting one, An old lady, aged 90, had long been accustomed to drink very largely of Eau de Cologne, and her servant, whose age was 36, having caught the infection, had inured herself to a diet of "good old wine, hot and well sugared."

On January 15th, 1820, the weather was intensely cold, the thermometer being down at 14° of Fahrenheit. It is supposed that the ladies took, on that account, an additional dose of aqua vitæ. Be this so, or not, their neighbours perceived a strong smell of burning animal matter at ten o'clock in the evening; and, in the morning, on entering their house, both of them were found in the state of ashes, the bones of the head only, and a small part of the neck of the old lady, and a portion of the right leg and foot of the younger person, being to be perceived.

The lady had been apparently in bed, and the servant was supposed to have fallen over her in attempting to give her assistance.

The room was filled by a dense vapour which had an insupportable stench. The bodies were not at first recognised, for Mr. Charpentier relates, that "they found neither Mrs. P. nor her servant."

"At first they saw no appearance of dead bodies, but they immediately recognised that Mrs. P.'s head was entirely burned. Its different parts, however, preserved their form; but, on the slightest touch, it all sunk away, and the bedstead, palliasse, mattress, feather bed, sheets, blankets, and curtains, were reduced to a cinder. Before they stirred these cinders they examined the fire-place, in which they found no wood, nor any charcoal in combustion: the fire had not been covered, and it had probably gone out for want of wood. A candlestick stood in the fire-place, and another on the ground, in the middle of the room; there was no candle in either of them.

On proceeding to examine the ashes, or remains of the combustion, there was found, in front of the spot which had been occupied by the bed, the extremity of a leg covered by a stocking, with a shoe on the foot, and which was recognised to be part of the right leg of the servant. It was the only portion of the body of this woman that had not been reduced to ashes.

The cranium of the mistress, devoid of the scalp, which had been burned, was found in a situation corresponding with that in which the head would be as the woman lay in bed. This was the only portion of her body that had not been utterly destroyed by combustion, excepting a small fragment of the neck, or rather the skin of the neck, that had been enveloped in a red kerchief, which had probably served as a cravat, and of which there were yet some remains immediately attached to the preserved portion of the neck.

The servant's bed, which was very near to that of the mistress, was untouched, as well as the table, chairs, and other furniture of the room, excepting a wooden clock, hung up against the wall beside the bed, that, having preserved its form, fell into ashes on the first movement.

Although the room had no ceiling, the beams and rafters, which were very near to the top of the bed, were not burned, but they were black and felt very hot. All the things about the room, especially such as were close to the bed, were extremely humid; which was owing, without doubt, to condensation of the dense vapours with which the room was filled on being first entered.

ART. 6. *Mr. Sylvester's Apparatus for Warming the Discovery Ships.*

A few days ago, we had great satisfaction in witnessing a trial of the above machine on board the Fury, at Deptford; the vessel in which Captain Parry is about to sail again for the Polar seas, to perfect if possible, the discoveries which he so well began the year before last.

In our next number, we shall probably enter on the subject of warming houses, as on one important branch of the science of domestic economy; a science which we consider to be most closely connected with the preservation of health, and we are glad to be led to it, sooner perhaps than was originally intended, by the excellent adaptation of it which we are about to describe.

It appears that great inconvenience was felt from the cold on board the Fury, when it was locked up last winter amidst the Polar ice in Melville's harbour. The ship was well prepared for resisting cold; but the imperfection of the fire places made all insufficient to keep out a cold of 55° below Zero; so that we believe Captain Parry was seldom able to raise the temperature of the ship above the freezing point, whilst during the night, it sunk so much, that in the morning, the thermometer commonly stood at 9°; the cabins were lined in some parts with ice, and even the blankets on [illegible] bed were not altogether free from an icy covering.

Under these circumstances, the comptroller of the navy applied to Mr. Sylvester of Great Russell Street, to enquire if his warming apparatus could not be advantageously applied to these ships, previous to their again sailing for the Polar seas.

The subject of warming ships was new to Mr. Sylvester, and it involved more difficulties than he at first expected to encounter; but from the experiment now made, it cannot be doubted, but that Captain Parry and his crew will find themselves much more comfortable in their winter quarters this year, than they were on the late occasion.

One of the principal difficulties arose from imperfection in the means of carrying off the smoke, or of getting sufficient chimney-draught to admit of a vigorous fire. This would have been an easy task if the stove could have been fixed in the hold of the vessel, but it was impossible to lower the apparatus to more than about twelve feet below the main deck.

In this situation therefore, which was in fact not more than six feet below the space to be warmed, Mr. S. placed one of his small stoves, calculated for warming a space equal to 38,000 feet in this climate. To the twelve feet of smoke flue thus acquired, he added ten feet above the main deck, thus making the chimney 22 feet long.

The chimney is composed of a double iron pipe; the inner tube being eight inches in diameter, and the outer one nine; thus leaving a space of half an inch between them.

The fire did not burn vigorously, but a sufficient draught was obtained to keep up a tolerable fire, such a one as is capable of burning a little more than one bushel of coals in 24 hours. This was exactly what Captain Parry required; for his whole allowance of coals does not amount to more than one bushel and a quarter per day, and that quantity was so speedily consumed under the old plan, that it was necessary, on the former occasion, to put out the fires at bed time every night.

The stove now put up, would have been much too powerful for the Fury in this climate, for the space to be warmed is only 15,000 cubic feet. But as the thermometer stood at 55° below Zero on Melville's island, it will be required to raise the temperature of the air 115° if the thermometer is to stand at 60°, whereas in this climate it would only be necessary to raise it 40° to do the same thing.

(To be continued).

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Original Department.

OBSERVATIONS ON CHILDREN.

ESSAY THE FOURTH.

ART 1. *On the Mode in which Diseases arise amongst Children of the Higher Classes of Society, and on the Causes of the diversified Forms under which they appear.*

IT has been said that the children of the higher classes of society are more healthy than those of the lower. This arises only from their being more properly fed and more assiduously attended to, both physically and morally. But still the happiness of every family is too often interrupted by the ill-health of the children who belong to it.

The foregoing essay therefore is partly intended to show, that the children of the rich become unhealthy from two causes; the one, an improper mode of feeding, the other an inadequate exposure of the children to the external air. Improper clothing and unwise moral treatment lend their assistance indeed, but the first mentioned circumstances constitute the grand causes of a great majority of the diseases of such children.

It is a curious fact, that very few females in the higher and middle ranks of society, who live in London, can suckle their own children. Their milk is deficient in quantity, and it by no means agrees with the majority of infants. A wet-nurse is obtained from a lower rank, and her milk is found to be abundant and of excellent quality. It is of great consequence to such females, that this circumstance should be explained.

It is very important also in another point of view. Many children of the poor die from being thus taken away from their mothers who go out as wet-nurses. These poor infants are almost always neglected and very often die from this neglect. It would therefore be a great saving of life among the poor of London, if mothers could be brought to nurse their own children like the Roman matrons of old.

The late Dr. George Fordyce, who was a man of great intellect and keen observation, made a remark which bears strongly on this fact. He said that the gentlemen of London are perhaps as healthy as any part of the English people; whilst the ladies of London are like hothouse plants, exceedingly susceptible of morbid actions, and unable to bear exertion or fatigue. He explained it by adverting to the different habits of the two sexes; the gentlemen he said are always in the air, the ladies always in the house or in a carriage, with no duties to perform which are calculated to give tone and energy to the constitution.

It is no wonder that persons so situated should become enervated and incapable of supporting such a drain on the constitution as suckling a strong child must bring with it; especially too, as the London custom of late night-visiting has great influence in making women nervous and in breaking up the general strength. In many cases also it does injury by deadening the wish to suckle. A certain portion of labour and a free exposure of the body to the fresh breezes of heaven are so necessary to perfect health, that, in the majority of cases, no substitute for them will answer the purpose.

Dr. Fordyce's observation is perfectly just, and his explanation of the fact is undoubtedly the correct one. Medical men often express their surprise at the small number of male patients who fall under their care. The practice of London medical men is chiefly made up of the diseases of children and females; although it is probable that the diseases of men, when they do occur, are more severe in character than those of women.

This is said to be remarkably the case in low fevers.

This fact of the inability of London females to suckle their children is often productive of great distress to mothers who are thus prevented from performing so agreeable a duty to their infants. It is very injurious too to the children; for although a wet-nurse may give it as good food as a mother, yet she cannot watch over it with the same tender solicitude, nor can she fashion its mind to those early habits of proper conduct, which are so important to its full health and happiness.

It is quite evident, as has been said above, that proper food is of the greatest importance to an infant's health; and it is equally evident, that the only proper food is its mother's milk, or that of a healthy wet-nurse. But, as the consideration of this practical point in the management of children will fall more properly in another part of these observations, it is sufficient to have thus alluded to it here.

Thus then the seeds of future disease are sown. Indigestible food is put into an infant's stomach; this very susceptible organ becomes slightly deranged in its actions, and consequently the child is cross and restless, or is otherwise disordered. But as the organ is perfect and the irritating cause but slight, the offending matter is expelled and the disorder subsides By constant repetition, however, the digestive organs become habitually deranged, and the child's health suffers in proportion to the degree of derangement. Perhaps this chronic state of ill health goes on for some time without the child's appearance being much changed. He is weak indeed and pale and somewhat emaciated; but his health is not consideredto be materially deranged until an attack of some acute disease, diarrhæa perhaps, occurs, by which, as it requires medical treatment and a recurrenceto a proper kind of food, the constitution is freed from the evil, for that time at least. A repetition of the errors in diet or general management which caused the first derangement follows; and consequently the preceding symptoms of ill-health and their exacerbation into an acute attack are again and again produced; until as the child increases in age, the disorder becomes more formidable, so that a long case of acute disease, the infantile fever for instance, is at last produced, instead of the former less important complaint. Still the same result follows; the offending cause is dislodged in the progress of the disease; and although it often happens that material injury is done to the child's constitution by the violence of the fever, and weeks or perhaps months elapse before he recovers from the debilitated state in which it is left by the continuance of the disease, yet health again returns and the patient is once more freed from the consequences of improper management.

Still it should be recollected that in too many cases this desirable event does not occur; for as it is observed in the last chapter, and will be shewn below, hydrocephalus is a very common consequence of infantile fever, and the body is almost always left in a valetudinarian state, which causes an attack of any of the common diseases of children to be much more dangerous than if the child were in good health.

Indeed, many other diseases, and those often fatal ones, are thus produced in children; the body becomes gradually more and more oppressed by the constant application of the irritating cause or causes above alluded to, and if absolutely all acute diseases are not thus formed, yet the existence of this state of deranged health causes the constitution to be more predisposed to be attacked by them in every case.

These observations apply to the production of disease in older children as perfectly as to the infantile state; but to recur again to the latter, a most important change takes place in infants at the time of teething. A more than ordinary proportion of blood is then sent to the head. Now mark what happens—If the child's health be perfect and its actions equable and moderate, this increase is unattended by inconvenience; the teeth pierce the gum without difficulty: and hence, one immense advantage in feeding an infant on breast-milk only; the teeth are cut without pain or danger, a fact which is familiar to every well-informed man in the profession. On the contrary, if a chronic derangement of the infant's health has been induced, the process of teething becomes a much more serious matter. The irritated constitution is thrown into more violent and irregular action by the new stimulus of the increased flow of blood to the head; the chief symptoms of that irritation naturally oocur in the head; the whole system is thrown into a state of fever whenever a tooth appears near the surface of the gum; and the child is menaced with convulsions, or convulsions actually take place, with all the attendant evils of fatal hydrocephalus, or its remote consequences to the constitution, if cured, such as squinting, palsy, epilepsy, or idiotcy.

Or, dangerous diseases are produced by this cause in another way.

A child is attacked by infantile remitting fever during the period of teething; it is more than probable that the increased flow of blood towards the head will cause the fever to terminate in hydrocephalus; and thus death follows as an inevitable consequence of an habitual excess in diet, so small however that a medical man is generally not attended to when he inculcates the necessity of discontinuing that excess. Or, a child is exposed to the contagion of measles or small-pox, or of any of the other contagious diseases of children. If his constitution be in full vigour, he will perhaps escape an attack of the disease altogether, the strength of his constitution being able, as it were, to overpower the contagion; but if the disease follow, it will be, not improbably, mild or severe according to the previous healthy or disordered state of the child's constitution.

An excellent illustration of the truth of the last observation will be found in one of the preceding numbers of this Journal (page 24th infra) in an account which is there given of an epidemic of measles which occurred in a large nursery of poor children, and where the severity and fatality of the disease were in the direct ratio of the degree of ill-health in which its unfortunate victims were found.

It would be easy to multiply details of the various modes in which this chronic disorder leads to severe diseases in children: how the various chronic eruptions take place; and how nearly all the diseases to which children are liable, are produced according as the peculiarity of each child's constitution leads to the one of them or to the other.

How naturally do considerations like these lead to the explanation of that great and curious diversity of character, which is manifest in the diseases of children, and indeed of adults also!

As the predisposing or remote causes, as they are called, of all diseases arise by such slow degrees, the effects which they will produce on the constitution must be infinitely varied; for the operation of these causes consists in the production of a certain degree of permanent or temporary disorganization of the part on which the irritation, falls. The kind therefore, and the degree of the symptoms which are produced by this irritation must vary as the circumstances of each child, with regard to its physical and moral state, vary. Hence, as no two children turn out exactly alike, either in form, in feature, or in mind, so the diseases of no two children are exactly the same; although the same causes, both remote and exciting, act in their production. One will be liable to skin diseases, whilst another will be prone to fall into the hydrocephalic state, on the invasion of an acute disease.

But it is unnecessary to illustrate this observation more particularly; except by saying, that these different diseases are more simple, and therefore more capable of being classed in children, than in adults; because the organization is less altered from its natural state in the former than in the latter. And also because new causes of disease are brought into action in adults—causes which had no influence on children; such as the operations of the mind, as they refer to the anxieties of life generally, and especially to the new form of existence which the body takes on at the age of puberty.

Thus, as we find, to use the language of Sydenham, that the constitution of the atmosphere, for the time being, gives a predisposition to the production of certain diseases at particular seasons, so does the peculiar form of chronic disorder, which has been produced in a child by improper diet and management, predispose it to be affected by one kind of acute disease rather than by any other; and it is well to have alluded to this influence of the atmosphere in modifying diseases, because it leads to the remark, that the forms of children's diseases are more decidedly influenced by the constitution of the atmosphere than the disorders of adults are. For, as each individual is more liable to be attacked by certain complaints than by others, because a weak part, as Celsus calls it, has been formed in his constitution either by hereditary descent, or by the repeated occurrence of disease, as is above described, and as it is necessarily better marked in adults than in children, this weak part becomes more and more liable to have the essential violence of any impending disease fall on it, as the person increases in age: therefore, a child's diseases are more under the influence of such modifying states of the atmosphere than those of adults are.

These distinctions follow from the fact which was pointed out clearly by Dr. Armstrong, that the various forms of disease, which appear in a number of persons, who have been subjected to the causes of the same disease under the same circumstances, arise from the modifying influence of this weak part. Thus, if this chronic disorder of irritation in children, so often alluded to in the preceding pages, have, from accident or otherwise, been determined to the lungs of the individual, which would be done for instance by the child getting an accidental attack of pneumonia during the time of its suffering under the chronic derangement, then, on the application of any cause of acute disease to the body of that child, after it has reached man's estate, the lungs, from being the weaker part, will in the majority of cases be subjected to the chief violence of the disease: that is, if the disease be typhus, it will be typhus with the chief symptom pneumonia, instead of its being an inflammation of some other part, an abdominal viscus perhaps, as determined by the constitution of the atmosphere for the time being.

So greatly is the health of the man influenced by the good or bad health of the child! but this is not the time for carrying these discussions further.

Such is the mode in which the diseases of infants are produced and their different forms determined. It will be remarked, that many of the above observations apply also to those who have passed the period of infancy and have become children. Indeed, the diseases of children vary from those of infants only from being rather less simple; and it may be here remarked, that the diseases of adults differ from those of children by being more extended, and therefore further removed from the simplicity of infantile disorder.

In infancy, the first simple dawnings of morbid action occur. A simple cause acts on a simple, because perfect, machinery, and the result consequently bears marks of the same simplicity. As infants grow into children however, new causes of irritation arise, and the old ones acquire a modified power by acting on the body, which has now become, as it were, contaminated by the effects of previous complaints. The diseases are no longer transient. They remain longer, are more complex, and are not so easily relieved; the infantile remitting fever takes the place of short attacks of indigestion, and if the system of bad management be continued, the chronic disorder, so often spoken of, puts on a more serious aspect, and either terminates in some form of marasmus, or it leaves the constitution in a languid unhealthy state, and lays the foundation for future scrofula or consumption, or for that valetudinarian state in which many persons pass their lives.

It is true, that as the powers of a child's digestion increase with its age, the constitution often recovers itself after the period of teething is passed, at least, where the system of feeding is not a very bad one; but, on the other hand, as the diet becomes more complicated in proportion as the child increases in age, an occasional excess becomes more detrimental; it also occurs more frequently; and thus the pallid cheek is oftener lighted up by the flush of fever, and a more frequent recurrence to medicine is required. But these are differences in degree rather than in kind, and do not require to be more particularly pointed out.

ART. 2. *On the Folly of trying to deceive the Medical Man who attends you.*

A LADY, whose health was very delicate, and whose constitution was inclined to consumption, was for a long time under the care of her medical man, for disorder of the chest, connected with an irritated state of the digestive organs, and apparently kept up by it.

It was, in vain, that he changed his remedies; the disorder went on uncontrouled by any plan of treatment, although the patient averred that she strictly followed all the directions which were given to her.

One of the principal of these directions was, that she should be exceedingly cautious about her diet; and, a list those articles of which she might eat was made out for her.

This lady took her medicines with great regularity, and she deceived herself into believing that

that was sufficient; therefore she considered the direction respecting diet to be entirely superfluous. Unfortunately however, she thought it right to deceive her medical man too, by saying, that she took the diet, which he prescribed, as well as her medicines. Of course, her word was believed—at least, for some time; but, at last, the truth became so apparent, that the question was repeatedly put to her, and the deleterious effects of such conduct was as strongly pointed ont as possible.

All was in vain, for she still denied the charge strenuously and decidedly. One day however, when the lady was worse than usual, the medical man, as he was going down stairs, met her servant. He went close up to her, stared her full in the face and said in a peremptory tone, "what did your mistress eat for her supper last night?" The girl was exceedingly confused and stammered out, "Oh, only some beef-steak pudding, Sir."

This unfortunate lady died of consumption a few months after this time.

ART. 3. *On the Use of the Warm Bath at the Termination of Fevers, but especially of Scarlet Fever, Measles, and other Eruptive Fevers.*

THE warm bath is too little used in this country as a general remedy conducive to health; and this neglect of warm bathing, as a matter of personal comfort, has perhaps been one cause why its use is much more limited in cases of disease than the experience of very clever men would seem to justify.

It is not intended here to point out any of the facts which have led to this opinion; but merely to recommend the warm bath, under particular circumstances, in cases which are of daily occurrence, and in which it has seemed to us that recovery has been much expedited by its adoption.

The eruptive fevers of children (of children, because they are usually taken before the person arrives at an adult age,) being attended, as every one knows, by a morbid state of the skin, leave behind them a disposition to throw off scales from the external surface of the body; so as to give the appearance of the skin being regenerated. In fact, no regeneration of the skin does take place; because the true skin is never injured except in small-pox and chicken-pox when pitting takes place; it is only that the cuticle or outer scarf skin loses its attachment to the true skin underneath, and falls off; or rather a new cuticle forms and pushes the old one off, just as trees shed their leaves in the autumn, because the new leaf which is to appear in the succeeding spring, grows under the root of the old leaf and in time pushes it off.

In some of the eruptive diseases, this scaling of the skin takes place more certainly and more extensively than in others. In the scarlet fever, for instance, it so invariably occurs, that medical men have taken that circumstance as a test in doubtful cases, that the preceding disease has been scarlet fever and not measles. The distinction indeed, is in some degree founded in error; because, though the absence of scaling after an eruptive fever may afford a strong proof that the disease was not scarlet fever, yet its presence, by no means proves that it was.

However this may be, it is quite clear that after scarlet fever at least, the whole of the cuticle peels off. This takes place generally in the form of scales; but occasionally large masses are detached, indeed the cuticle covering the hands and feet has in some instances fallen off in so entire a state, as to give the appearance of a glove; and, a medical friend possesses a sheet of cuticle, which was separated from one of his patients, as large as a hat-crown.

In common cases, this scaling is of no consequence; but as after scarlet fever, another diagnostic symptom as it is termed, occurs, viz. the appearance of anasarca or dropsy under the skin, it is reasonable to infer, that there is some connexion between the scaling and the dropsical symptoms; for as large quantities of fluid pass off by transpiration through the pores of the skin, the adherence of so much dead matter to the surface of the body must interfere with this transpiration and thus may give rise to the dropsy.

At all events, such a cause of evil had better not exist; and therefore, as the symptoms of fever usually subside with the eruption, it will be always right to use the warm bath within the first week of convalescence, after scarlet fever: not merely to put the child into warm water and take it out again, but to rub the whole body well over with soft soap before immersion, and soak the body for nearly half an hour in the warm water. After this has been done it will be easy to rub off much of the scales whilst the child is in the bath; and the remainder will be readily removed by the hand, after the patient comes out and before his skin has had time to become perfectly dry.

It is astonishing how much dead extraneous matter may thus be removed. A very severe case of scarlet fever occurred about a month ago. The fever ran exceedingly high, and the eruption was most copious. About four days after the subsidence of these symptoms, the skin was like a file; harsh, dry and disfigured; the skin of the stomach and about the navel being especially affected. It could scarcely be expected that fluid should pass through the cuticular pores whilst the skin was in this state; and in fact, the child became more peevish; and her hands, feet, and face, began to puff up, so that anasarca was clearly manifest.

The bath was used as above directed, and under the exhibition of purgative medicines, the dropsical symptoms immediately disappeared.

Now though this scaliness more commonly attends scarlet fever than other eruptive fevers, it is not uncommonly found in measles, as well as in others; nay, even in the common or specific fevers of adults, whenever the skin has borne any peculiar part in the disease, the same scaling takes place. Of course the warm bath is equally applicable to all such cases.

But, as it is commonly supposed, that scaling does not take place after the measles, it may be well to relate, that a little boy after having had the measles, a few weeks ago, with symptoms of unusual severity, the face, hands, feet, and lower part of the abdomen, above the groins, were as completely covered by scales, on the third day after the eruption declined, as usually occurs after scarlet fever. But the scaliness did not appear in other parts; and perhaps for this reason, that the parts above-mentioned always show more of the symptoms than any other portions of the body.

There could not be a doubt of this case being measles, because the boy had caught it in a school where others were ill; and, in him, the disease was peculiarly well marked.

It is thus then recommended, that the warm bath should be used, as above described, at least once after every case of eruptive fever; and indeed, the recommendation may be advantageously made to refer to every other kind of fever.

The temperature should be, not lower than 97 degrees of Fahrenheit's thermometer, and perhaps not higher than 100.

On another occasion, the general subject of warm bathing will be discussed, for it would be out of place, here; and therefore, it only remains to say that were there no specific reason, such as the scaliness of skin, to suggest the use of the warm bath after fevers, the mere matter of cleanliness would be a sufficient recommendation. In measles, for instance, where keeping the skin warm is so important, and where, if the warm bath have not been used in the course of the disease, the skin, of necessity, becomes loaded by the remains of unpleasant perspiration and of other secretions, the removal of such noxious matters must be advantageous. But, it further suggests itself, that as the contagion in the eruptive fevers may be supposed to lodge or harbour in this dirty secretion, the cleanly process recommended above, will probably shorten the time during which the patient may communicate the disease to those around him.

Art. 4. *On the Treatment of Wounds.*

It is probable that mankind were led to practise surgery before they became sufficiently civilized to attempt the cure of internal complaints. Man, in a state of nature, as it is somewhat erroneously called, is more liable to be injured by external accidents than to be attacked by internal diseases; and probably his first essay as a surgeon was an attempt to alleviate the pain of a wound, or to restrain the bleeding from its surface.

The word wound is not used in a very definite sense, either by medical men or by people in general; for even medical men have not agreed as to its exact meaning. Every one calls that a wound, which is made on the surface of the body by the cut of a sharp instrument; but the fact that some persons call it a green wound, proves that they are accustomed to apply the word to other and to different cases.

The truth is, that the skin is broken in ulcers as well as in wounds; but, although the two states differ widely, yet as they run into each other in various ways, it is really difficult in many cases to decide, whether the affection is to be called a wound or an ulcer.

The broad line of distinction however between them arises thus. A wound is caused by an accidental injury from without; an ulcer is produced by the action of an internal cause of disorder. The definition of a wound then is—"a division of the soft parts of the body, more or less recently produced, commonly attended by a greater or less degree of hemorrhage, and almost always occasioned by an external mechanical cause." This definition is not strictly correct, because gunshot wounds do not bleed, and every wound if left to itself naturally becomes an ulcer before it is cured; but it is sufficiently precise for the present purpose at least.

Wounds vary much in importance, from a trivial cut on the finger to wounds which are necessarily fatal. When the skin only is divided, by a clean and sharp instrument, it seldom happens that the cut is dangerous; but an incision carried below the skin and the fat which is beneath, is often very hazardous, and is always attended by unpleasant consequences. Some of the large blood vessels lie very close to the skin, and may be wounded. The large cavities of the body are in no case very distant from it, and even the heart itself is very little below the fat or cellular membrane, as it is called. The nerves too may be injured by moderately deep wounds. The extent of the injury, also, the violence with which it is inflicted, the nature of the wounded parts, the age of the patient, the soundness or unsoundness of his constitution, &c. all these circumstances make wounds of more or less importance, and render them more or less hazardous.

The most simple wounds are such as are made by a clean sharp-edged instrument. These are called incised wounds. If the instrument be of a different kind, the case may come under the class of punctured wounds or of contused, lacerated, poisoned, or gun-shot wounds. All these forms differ from each other, and require different modes of treatment; and each class becomes of more or less importance as the accident occurs on this or that part of the body. Hence the situation of wounds leads to another and an important division of the subject; as into wounds of the head, the thorax, the abdomen, the extremities, &c.

It will not be necessary to enter minutely into the causes of difference in wounds; but by being aware of how much these accidents differ in importance from each other, an unprofessional person will be less likely to trust to his own judgment in a doubtful case, than if he were ignorant that any doubt existed respecting it. A few observations will therefore be made on each kind of wound.

Of Incised Wounds.—These form the least dangerous cases; at least if the cutting instrument be clean and sharp, and the skin and cellular membrane only be divided. Such cuts generally bleed freely; but as the bleeding evidently comes from the whole surface of the cut-skin, and the blood is of a florid red colour, no danger is to be apprehended; for it will commonly cease in less than a quarter of an hour. However, if the blood proceed from a single point in jets, so as to form a pulsating stream, an artery has been divided; and the size of the stream will generally determine the size of the injured vessel, but not always. Even small arteries will cease to bleed in a short time; and in all cases, if the blood be caught in a basin, so as to measure the quantity lost, and it be recollected that large basins full of blood are taken every day from the body without injury, and also, that the thumb or finger pressed on the bleeding point, will in general command the bleeding; it will be easy either to wait without apprehension for the natural obliteration of the the bleeding artery, or to restrain the flow of blood until the arrival of a surgeon. In this way confusion and unnecessary fears will be avoided.

It will also be advantageous to know a little of the distribution of the arteries. They run, for the most part, in the least exposed situations. Therefore the larger ones are always found on the innerside of the limbs, in the bends of the joints, or deep in the cavities of the body. Thus, no large artery will be found on the front, or back part, or outside of the thigh, or of the arm or forearm; and, even in the inside of these limbs, so thick a layer of fat and muscle is placed between the skin and the larger arteries, that they will not be reached, except by a deep cut. In the fold of the joints however, where there is but little fat and generally no muscle, the arteries lie more superficially. Hence incised wounds in the groin, or ham, or inside of the ancle, or sole of the foot, or in the armpit, the bend of the arm, the inside of the wrist, or the palm of the hand are dangerous, if they bleed largely and by jets.

Very large arteries and veins too, lie also on each side of the front of the neck, and considerable vessels are found on the temples, and at an equal distance between the lowest projecting point of the back part of the scull and the ear, on each side. But there are none of considerable size on the back of the neck, the outside of the chest, or abdomen, or on the back.

The veins indeed lie more superficially; but they too are chiefly distributed on the inside of the limbs, and, generally speaking, none but a very few of the larger ones will bleed for any considerable time when cut.

The blood which flows from a vein, as every body knows, is of a dark blue-red colour, very different from the florid red of arterial blood; and although it flows from a point, yet it never comes by jets, as when an artery is divided.

So much then for the bleeding of simple incised wonuds; and, as but one other striking peculiarity, which will be spoken of below, occurs in their history, a general account of the treatment may now be given, with such observations, on the varieties of application which are required when the wound is situated on different parts of the body, as may be thought necessary.

Treatment of simple Incised Wounds.—From the elasticity of the skin, the lips of a wound contract and are separated from each other. But the smaller the wound is, of course the less it gapes. So in a cut on the finger, the lips of the wound are separated from each other in so small a degree that they are left in the most favourable situation for a reunion of the divided parts larger. In wounds of the skin however, the separation of the edges is so considerable, that, unless the lips are brought together by mechanical means, the case becomes much more tedious, and it is accomplished in a different way. In fact, if the skin be divided, so that the edges of the wound contract and separate from each other, the arteries of the part take on a new action, the wound discharges matter and it is changed into an ulcer, before it heals. When this form of cure takes place, the part is said to suppurate and the cavity is filled up by granulations.

Until of late years, it was customary to cure almost all wounds by this process; and even at the present day the French surgeons adopt a similar plan in very many cases: nay, they find fault with the English for using a different method so exclusively. It is curious that they should not see how materially it increases the pain and danger of a wound, as well as renders the cure tedious to stuff it full of lint, and make a large cavity or ulcer, to be filled up afterwards by the slow formation of granulations.

It is now the practice in this country to draw together the lips of a wound, and to keep them in contact by suitable means. Under this treatment, the sides coalesce, the medium of union being a layer of adhesive matter, called coagulable lymph, which is thrown out by the divided arteries; new blood-vessels shoot into the intermediate substance; the part thus becomes organized, and the whole wound is healed in the course of a very few days.

This method of uniting wounds forms one of the greatest improvements of modern surgery; for it is applicable to wounds of the largest size. Formerly, when a limb was amputated, the wound was filled with lint; and, many weeks, nay, even months elapsed, before the extensive surface was covered by new skin; for ulcers become tedious in healing, principally from the slowness with which skin is formed. Now, on the contrary, the incisions are so made, that the divided edges of the skin may be easily drawn together; and whilst the wound is thus healed at once, a mere line of scar remains, instead of an extensive cicatrix or surface of new skin, which is always more liable to ulcerate than the natural skin of the body.

In the same way, the very large wound which is formed in amputating the breast is often healed in a very few days.

The most convenient way of drawing the lips of a wound together, is by the application of some kind of adhesive plaister. In large wounds, it was usual to close them by means of stitches; but experience has shown, that this is very seldom if ever necessary; except, in such peculiar cases, as none but surgeons can possibly be called on to manage.

Almost any kind of sticking plaister will answer the purpose; but the surgeon's adhesive plaister, which is a mixture of resin and diachylon, spread on linen, by means of a warm iron instrument called a spatula, is the best. It may be purchased in every populous town.

If the wound be on one of the smaller limbs, as on the finger or arm, and it run lengthways, a strip should be cut long enough to go round the limb and to wrap over to a considerable extent. Then if the strip be held at the two extremities, and the middle of it be applied to the part of the limb opposite to the cut, it will lie at right angles to the wound, and by drawing the ends towards each other, and then crossing them over the wound, the lips will generally be brought together, and will be kept in contact by the adhesive nature of the plaister.

It is usual to apply a bandage over the plaister; partly to assist in supporting the limb, and partly to prevent the plaister from slipping.

Before the application however, it is necessary to stay until the bleeding has entirely ceased, to wash off all clots of blood, both from the surface of the wound and from the surrounding skin, and to make the part perfectly dry; otherwise, the plaister will not adhere, and union will not take place.

After a wound has been thus bound up, it is necessary to keep the part as much at rest as possible; for, if the edges are disturbed and the contact be thus broken, the surfaces will not unite. So, although it is an easy thing to bind up a cut on a finger properly, very few such wounds heal by the first intention, as this summary mode of cure is called; because, from the fingers being so moveable, the edges are rubbed together, or are occasionally separated from each other, the contact is broken and the union is prevented. Therefore it is, that a cut, as we all know from experience, generally begins to inflame after a lapse of twenty-four hours, and becomes painful, and that a day or two elapses before the small wound is healed; whilst it often happens, that when care is taken to keep the part at rest, perfect union is accomplished in an hour or two after the accident; a union which would be permanent were it not very often destroyed by the finger being imprudently moved.

There are many other ways however of binding up wounds satisfactorily. If the gum which is found on cherry-trees be dissolved in a small quantity of water, and spread on brown paper; by holding a strip of plaister thus made, over the steam of hot water, or by otherwise wetting it, so as to make it adhesive, it may be used in the way above described; and it has this recommendation, that as it becomes very hard and stiff when dry, if a sufficient number of strips be put on the finger or other limb, the part is enclosed in an unyielding cylinder, which, like the splints on a broken leg, preserves the edges in contact, because it effectually restrains the motion of the limb.

Indeed, one of our unprofessional friends has carried the use of this unyielding plaister so far, as to form little hollow coverings or caps of it, for placing on boils or other affections of the skin, which will not bear to be pressed on. When these caps are made in the shape of a small hat with a low rounded crown and a broad brim, and are moistened and properly applied, we have seen them of great use; for if the crown of the cap be formed of two or three layers of the plaister, it will bear a considerable weight when allowed to dry, even the pressure of the body when a person is sitting on a hard chair.

Shoe-makers close cuts on the fingers, &c. by binding waxed thread round the part; and it is a very good mode of cure, if care be taken not to draw the thread tighter than is absolutely necessary. Or—if adhesive plaister be not at hand, by spreading shoemaker's wax on the limb near the cut, but not on its very edge, strips of linen may be applied, as if they were strips of adhesive plaister, and they will be equally efficacious. Glue may be used in the same way.

With such directions as these, it will be easy to bind up the majority of cuts on the smaller extremities of the body; but occasionally a cut is made on a limb which is not so easily managed. It would be difficult for instance to close a long cut, across the arm or leg, by means of the circular plaister or bandage; for the edges will be considerably separated, and they will not be easily brought together by these means.

In such cases, the plaister must be applied across the wound; and, if the following direction be attended to, the edges may be brought together with great ease.

When the surrounding skin is perfectly dry and clean, take two long strips of plaister, and stick one half of one of them firmly on the skin at right angles to the wound, that is longitudinally on the limb below the cut, and one half of the other in like manner to the skin above the wound. When this is done, one half of each plaister will adhere to the skin, and the other half will hang loose. If the two ends be now taken hold of, and be crossed over the wound, the lips may be drawn together as if the plaister were applied circularly.

In these cases however, it is particularly necessary to apply a bandage over the plaister as is directed above, and tbe limb, both during the application and afterwards, must be placed in that position, which favours the junction of the edges as much as is possible.

No stress has been laid, in these directions, on removing dirt or other extraneous matter from the wound before it is bound up; because simple cuts are generally made by means of a clean instrument. But, it is necessary in all cases, to use fresh warm water in washing away the blood, and to avoid the application of any extraneous matter to the wound.

It will be remarked, that no healing applications are recommended to the wound itself; no tincture of myrrh, no Friar's balsam, no brandy. They all do harm to simple wounds, and as far as possible prevent union. The whole theory consists in accurately closing the wound, in keeping the lips in contact by placing the limb in a favourable position, in enjoining absolute rest until union has taken place, and in avoiding the appplication of air, and of other irritating matters to the part itself.

If severe pain occur some hours after a wound has been bound up, the bandage and circular plaister are probably too tight; in which case they must be slackened. But before this is done, as such interference is always injurious, cold lotions, as water, should be kept constantly applied round the limb, for a considerable distance both above and below the wound; for the pain may arise from inflammation, which often follows wounds, and requires to be treated in this way and by low diet, purging, by the horizontal position, as in bed, and even bleeding if the symptoms be violent. If throbbing be felt round the part, these antiphlogistic remedies and a loosened bandage are more especially required; and indeed, in all cases of severe wound, low diet, and a dose or two of medicine will always add greatly to the comfort of the patient.

It does not often happen however that much fever follows a simple incised wound of moderate size, except the patient be of a bad habit of body, or he be imprudent in interfering with the above mode of cure, or in not submitting to the necessary discipline. Therefore the existence of such fever will always demand the skilful advice of a medical man.

In treating wounds on the head, or on any other part of the body which is covered by hair, the part should be shaved before an attempt is made to put on plaisters.

If the wound be on the face, it is so important to produce union by the first intention, that all the above directions should be carefully attended to, and the patient, if possible, be placed in the hands of a medical man.

The simple incised wounds of all other parts of the body are sufficiently treated of in the observations which are made above.

As a general rule, the plaisters should be left on the wound untouched for three days. But if the wound be large, and sufficient spaces be left between the strips to give exit to any purulent matter which may form, it will generally be advantageous not to remove the plaisters for four or five days after the accident.

In all cases, when the wounds are dressed, the applications should be changed quickly, so that the air is permitted to get to the wound for as short a time as possible. Therefore fresh plaisters and bandages should be prepared before the old ones are taken off; and not more than one or two strips should be removed without fresh ones being applied in their stead. For, as the union between the cut surfaces is a very tender one, if the support of all the plaisters be taken off at once, the contractibility of the skin may cause the edges to separate, and the union is often broken in this way.

Change one or two strips of plaister at a time; taking care to wash the part well with warm water, and to make it dry as well as clean, before the new plaisters are applied. Even after perfect union has taken place, it is still necessary to continue the application for a few days, until the parts have gained strength from consolidation.

It only remains to say, that wounds, made by a clean sharp instrument, do sometimes contain extraneous matters which require to be removed.

Broken glass or pottery is a frequent cause of incised wounds; and, not uncommonly, a portion of the glass or pottery is left in the wound. A little girl fell in carrying a wash-hand basin across the room, and a large cut was made on her cheek. The wound appeared to be clean, and it was skilfully closed. Union however took place but very partially; inflammation came on, and, in a week, the wound was changed into a gaping ulcer, which did not heal until several pieces of pottery had been discharged.

In this case an unsightly scar was left, where none would have occurred, if the extraneous matters had been removed at the time of the accident.

A young lady complained of a tumour in the palm of her hand. It was not inflamed; and, though there was no appearance of a scar, she believed it contained a certain portion of glass. An incision was made, and a very sharp, angular, bit of glass was found. The patient had cut herself some years before, and it is curious, not only that the wound had healed over the piece of glass, but that the latter, sharp and angular as it was, had remained under the skin, for so long a time, without producing irritation; for, the lady requested that it might be removed, more because the tumour interfered with her playing on the piano-forte, than because it gave her pain.

Thus then, if a simple incised wound be made by a brittle instrument, great care should be taken to remove any portions of the instrument itself that may be left in the wound.

In the next Number some account will be given of contusions, and other kinds of complicated wounds.

Miscellaneous Department.

Art. 5. Review of

Peptic Precepts: *pointing out agreeable and effectual methods to prevent and relieve Indigestion, and to regulate and invigorate the Action of the Stomach and Bowels.* By the Author of the Cook's Oracle. London, 12mo. 1821. pp. 48.

The author of this little treatise is an odd fellow; but he has, nevertheless, given us here some very good sense; although it may be dished up in rather an outré style.

Indigestion is confessedly a very common complaint; and the author appears to have written his book, chiefly to deprecate the too common use of violent purgations for its cure. There is much good sense in this for instance.

The author first gives directions for avoiding and curing indigestion. His rules after a drinking bout are good, but oddly expressed.

" When a good fellow has been sacrificing too liberally at the shrine of the Jolly God, &c.

The author then discusses the proper mode of curing that spasm of the stomach which is produced by flatulence; and he very properly recommends the horizontal posture, and hot water or warm wine, or hot brandy and water. The nightmare also comes under his review, as does palpitation of the heart; which last, he very truly says, is a common sequela of indigestion.

He recommends stimulants for the nightmare; such as wine, brandy, peppermint water, sal volatile, tincture of rhubarb, &c. On this we should say, that whilst stimulants will assuredly relieve the nightmare when present, it can only be prevented from recurring, by temperate and proper habits of diet; which will, in a short time, leave no cause for the nightmare to make its appearance.

The peristaltic persuaders * too are recommended as an "agreeable and effectual assistance," "when the stomach sends forth eructant signals of distress for help against indigestion."

A tea-spoonful of Epsom salt in half a pint of warm water taken before breakfast is also recommended, and

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* It seems to be one of the great objects of this book to recommend these peristaltic persuaders, (certain rhubarb pills) in place of the more violent drastic purgatives which are commonly taken as aperients: and indeed they are very good pills; on which account we recommend them likewise.

The persciption is,

Take of Turkey rhubarb, in fine powder, two drachms, syrup (by weight) one drachm, oil of carraway ten drops; to be made into forty pills, each containing three grains of rhubarb. As one recommendation of them amongst others, the author says, they may be given, when pounded, to children; for "we have made our pills," says he, "to taste exactly like gingerbread." These peristaltic persuaders are said to be good for every thing, and for every body; young and old, delicate and strong. They are certainly good pills, and, amongst other praises, the author remarks, that "one or two very gently increase the action of the viscera, help them to do their work a little faster, and enable the stomach to serve with an ejectment whatever offends it and move it into the bowels."

If a speedy operation be desired, tincture of rhubarb is recommended, to be made, by infusing for ten days, three ounces of pounded rhubarb and half an ounce of pounded carraway seeds in a bottle of brandy. A table spoonful for a dose.

that its operation be assisted by taking warm water or broth, or tea or gruel, within ten minutes after the salts have been swallowed; and to cover the taste of Epsom salt, he recommends, that a lump of sugar and a bit of thin-cut lemon peel be infused in the hot water for a short time; as also that grated ginger may be added.

This also is good sense; and there is more too, and of a higher order, in recommending simple medicines, like these, for indigestion and flatulence, instead of tonic medicines, which assuredly only act as a temporary stimulus to the weakened digestive organs, instead of removing the cause which offends them.

The following observations are so good that we shall transcribe them:—

"People are often needlessly uneasy about the action of their bowels. If their general health is good and they have neither headache nor other deranged sensations, and they live temperately; whether they have two motions in one day or one in two days is not of much consequence. However, that the alvine exoneration should take place regularly is certainly most desirable; especially in the decline of life, i. e. after thirty-five years of age, when the elasticity of the constitution begins to diminish.

To acquire a habit of regularity, Mr. Locke advises, that "if any person, as soon as he has breakfasted, would presently solicit nature, so as to obtain a stool, he might in time, by a constant application, bring it to be habitual. I have known none who have been steady in the prosecution of this plan, who did not in a few months obtain the desired success."—*On Education*, p. 23, &c.

We earnestly recommend this plan of Mr. Locke's, as a much better one, than that of taking opening medicine habitually.

Costiveness however, as the author remarks, is to be cured by diet and regimen, rather than by medicine.

" Coquina est optima medicina." In effecting this desirable end, therefore, of inducing an habitual action of the bowels, " the delicate and nervous, will derive great advantage from keeping a register of their health, and should note and avoid whatever disagrees with their digestive organs ;" and it is further said, with great truth, that " attending to the effect which various aliments produce on the bowels" will be sufficient to induce that free, *but not open* state of bowels which is the best for health. As he says,

" Oportet sanorum, sedes esse figuratas." Amongst other dietetic aperients, salad oil is recommended ; and that it should be taken in the dose of a table-spoonful, mixed with egg, pepper, vinegar, and salt, as a sauce to any aperient green vegetable, or to fish or cold meat.

A too open state of the bowels is then very properly deprecated ; as productive of a chronic weakness of that part, which is often destructive of health in after life.

" If the bowels," says he, " are unfaithful to the stomach, and instead of playing fair, let go their hold of the pabulum vitæ, before the absorbents have properly performed the process which that grand organ has prepared for them, nutrition will be deficient, and flatulence, &c., giddiness, spasms, head-ache, and back-ache, and what are called bilious and nervous disorders, and all the diseases incidental to debility will attack you on the slightest cause."

The proper diet for those who have relaxed bowels is then adverted to, and some curative directions are also given.

A new subject is then started—no less than, not only to show how much a fine voice in singing " depends on a vigorous state of the system," but a discussion on the best method of learning to sing with taste and expression. The directions are excellent; but we must leave them to be further inculcated by the singing masters.

Prescriptions for tinctures, &c. follow; and then we have a very curious dissertation on gruel. The receipt for gruel is worded thus:

" Ask those who are to eat it, if they like it thick or thin; if the latter, mix well together, by degrees, in a pint basin, *one* table-spoonful of oatmeal with three of cold water; if the former, *two* spoonsfull."

" Have ready in a stew-pan, a pint of boiling water or milk; pour this, by degrees, to the oatmeal you have mixed; return it into the stew-pan; set it on the fire, and let it boil for five minutes, stirring it all the time to prevent the oatmeal from burning at the bottom of the stew-pan; skim and strain through a hair sieve."

Thirteen different ways of flavouring gruel are then given; such as, by sweet herbs, savoury spices, pea-powder, mushroom catsup, curry-powder, ale, wine, spirits, and celery seed; and by making it with broth, instead of water.

After this, the praises of gruel are loudly sung, reference being made to Tryon who called it " the king of spoon-meats, and the queen of soups;" to another also, who gives " directions to prepare (from it) fourscore noble and wholesome dishes, upon which a man may live excellent well (in 1697 mind) for twopence a day;" and to Franklin, that greatest of authorities in matters of common life; whose " favourite breakfast was a good basin of water gruel, in which there was a small slice of butter, with toasted bread and nutmeg.

One subject of real importance remains to be noticed, and that is the necessity for masticating the food well. Digestion certainly cannot go on well unless this be done. Spalanzani found, by enclosing food in spheres of metal, that well chewed meat is much more easily digested than that which is not chewed.

"To chew long and leisurely, is the only way to extract the essence of our food, to enjoy the taste of it, and to render it easily convertible into laudable chyle; by the facility it gives to dissolve it without trouble." "From thirty to forty may be given as the mean number of munches, that solid meat requires, to prepare it for its journey down the *red lane*." "Mastication is the source of all good digestion." "The sagacious gourmand is ever mindful of his motto,

> "Masticate, denticate, chump, grind and swallow."

The four first acts he knows he must perform properly, before he dare attempt the fifth."

This subject of mastication naturally leads to the care of the teeth, and some remarks on this subject close the book.

A very soft brush and tepid water, with careful cleaning *every night*, are recommended; as is, rubbing the face with three parts of salvolatile and one of laudanum; a small portion being put into the tooth on cotton if decayed, in cases of the face-ache; as also rubbing the throat with the same in cases of sore throat.

This work is written partly, as we have said, to recommend the "Peristaltic Persuaders," and partly to recommend a book written by Dr. Kitchener, called, "The Cook's Oracle;" which, as it is apparently more than half medical, we shall give some account of in an early Number.

The "Peptic Precepts" will be read and relished by many people. A philosopher would perhaps have chosen a different style of writing; but if the odd sentences, above quoted, call public attention to important facts more certainly than graver language, we think him the best philosopher who expresses himself in the oddest way, at least as far as it is an object to teach those facts.

ART. 6. *Mr. Sylvester's Apparatus for Warming the Discovery Ships.*

IN the last Number we gave an account of the circumstances under which this apparatus was constructed, and of the difficulties which attended its completion, we now give the remainder of our observations.

The stove now put up, would have been much too powerful for the Fury in this climate; for the space to be warmed is only 15000 cubic feet. But, as the thermometer stood at 55° below Zero on Melville's island, it will be required to raise the temperature of the air 115° if the thermometer is to stand at 60°, whereas in this climate it would only be necessary to raise it 40° to do the same thing.

Hence, as in allowing for the difference between 15000 and 38000 cubic feet, the stove will raise 15000 cubic feet of air 101°, whilst it would only raise 38000 cubic feet 40°, the living part of the vessel will be 46°. The men will find this tolerable enough with moderate exercise; and the temperature will be permanent during the whole of the twenty-four hours.

The stove is placed nearly under the middle hatchway, about twelve feet below the main or upper exposed deck of the vessel, and six below that deck on which the men live.

The air which immediately surrounds this stove will be very cold; and it is this air which will enter the stove at its under part, for the purpose of being warmed, as well as a part of it for supplying the fire with the air necessary for combustion.

One portion of the warmed air is discharged into the fore part of the vessel which is occupied by the seamen; the other is conveyed away by two flues which are made of rolled iron. These flues run along each side of the vessel. One of them gives its contents to several sleeping births near the stove, to the purser's room, and to the midshipman's birth and gun-room; and lastly, to captain Parry's sleeping birth. The other flue distributes its air to all the sleeping births on that side, and at last terminates in the captain's cabin.

The smoke flue rises to the under part of the main deck, and it is then carried horizontally forward until it reaches the fore hatchway; when it again becomes perpendicular, and is carried upwards for ten feet into the open air.

With this arrangement, if proper attention be paid to the fire and to the adjustment of the apertures, the living deck of the Fury will be heated *uniformly* to the greatest extent that the limited supply of fuel will admit of.

Captain Parry appeared to be perfectly satisfied with the apparatus, and, we believe, reported very favourably of the experiment; but Mr. Sylvester informed us that he is at present constructing a stove, which is more especially adapted for warming ships; and he further said, that by constructing the flues, for warm and cold air when the vessel is built, every part of a ship may be perfectly ventilated, and thus rendered wholesome; whilst the living apartments would be rendered as dry and comfortable as the rooms in ordinary dwellings. Even the hold would be perfectly ventilated in such a case, (which is so important, that fatal diseases have often originated from the hold being foul for want of ventilation); for, the stove would be supplied with air from the hold; which air would be drawn directly from the external atmosphere.

Thus, by this new plan of warming and ventilating ships, they will not only be warmed, but even cooled under certain circumstances; for the addition of such perfect ventilation to the warming process will perfectly remedy that closeness and feeling of oppression which every one has complained of who has passed much time at sea, especially in warm latitudes.

ART. 7. DR. STANLEY, of Whitehaven, relates, that he has sent *meat*, which had been lightly brushed over with purified *pyroligneous acid*, to the West Indies, and received it back, a year afterwards, "perfectly fresh and sweet, and (making,) with the addition of salt and vegetables, a palatable and wholesome dish."—Brewster's Journal, vol. 8. p. 344.

ART. 8. Remarkable *Hail Storm* at *Orkney*, on July 24, 1818. MR. NEIL gives an account of this very curious circumstance, in the same journal, page 365. At mid-day, much thunder and lightning occurred; when, about ten o'clock, a black cloud seemed to rise out of the sea; it came rapidly from the south, and soon extended itself so much as to cause great darkness. On a sudden, the cloud was, it were, rent asunder by a violent explosion of lightning, so that the mainland of Orkney and the island of Stronsa could be seen for a moment, and "the thunder seemed to strike the surface of Stronsa Frith in the manner of a solid body dashing into the sea." The wind rose, the sea was greatly ruffled, and this flash of lightning was instantaneously followed by noises like the firing of guns "in Stronsa caves," and then the hail began to fall. The first stone which came through the window, and struck the floor with great violence, was "really like an egg." The wind increased to a hurricane, and the tempest, though it continued but ten minutes, left the most destructive marks of its violence behind it.

The noise of the pieces of ice striking the sea was "quite terrific;" and "not only did the hail keep the water, as it were, boiling, and covered with white foam, but he (a Mr. Caithness) repeatedly saw the lightning, striking from the cloud, into the sea, and the water, where it was struck, dashing up as high as masts of ships."

It was found, on going out after the storm had abated, that "in the close or farm court, surrounded by offices, the hailstones had accumulated and lay a foot and a half deep;" and even in the fields, the crops of every kind were covered, as well as beaten down: "the astounded farmer saw only fields of rough ice."

"Alarmed by the horrid cries, very different from the usual bellowing, of some black cattle, which had been grazing on pasture land at some distance, Caithness attempted to wade out among the hailstones, in the direction of the cattle. The "loose ice," he says, "slipped below his feet, and sometimes, when he happened to stumble, reached to his knees. In this way his legs were so much cut by its sharp edges, that he was soon obliged to desist, and to wait till the ground began to appear, by the melting of the hail. The pieces of ice he describes as of various shapes: most of them were round like eggs; many were flattened, and not unlike "thick clumsy oyster shells": some were smooth on the surface, others ragged and jaggy. Some of these appearances probably arose from hailstones being partly dissolved, the weather being warm."

" Mr. Taylor (a neighbouring clergyman) likewise remarks, that some " were as finely polished as marbles, while others were irregular, and made up apparently of pieces of conglomerated ice;" and that the largest lumps he observed were about six inches in circumference. Mr. Caithness thinks that the largest pieces of ice which he lifted, might weigh from four ounces to nearly a pound; and he describes the hailstones as being generally of a greyish white colour, not unlike fragments of light coloured marble. The terrified black cattle and horses, which had broken their tethers and been observed at the beginning of the fall of hail, running violently backward and forward, galloping and flinging, had now collected together in a herd. Caithness at length made his way to them through the half melted ice; they still trembled exceedingly; some of the horses had laid flat down on the grass, with their heads stretched out; and all of the animals were more or less cut, and bleeding. Some of the weaker horses, the farrier says, will never recover; the milch cows, he adds, were struck *yeld*, or gave no more milk; and indeed would not suffer the people to attempt to milk them any more.

On the links or downs, at some distance from Caithness's house, a large flock of tame geese had been feeding; these he remarked, seemed to remain motionless on the turf; and on proceeding to the place, he found many of them wholly deprived of life; a few were still living, but so much injured, that all of them pined away and died in a short time; some of these poor birds had their bills split: others had an eye struck from its socket and hanging by the nerve; the brains of some were fairly knocked out; many had either a leg or a wing broken.

Owing to the heat of the season, the ice soon disappeared; and Caithness's fields, which, less than an hour before, had been covered with corn crops, just beginning to come into ear, and superior in luxuriance to what had been seen in Orkney for many years, seemed, (to use the farmer's expression) to have been "absolutely ploughed black." Many of the hailstones which fell first were sunk in the corn fields from three to four inches deep: and even in the firm old pastures, each of them had made a hole in the sward, exactly of its own size and shape, to the depth generally of about two inches. In some of these holes the balls of ice lay unmelted, long after the others had disappeared. Mr. Taylor says, that the surface of the ground, all around his house, was every where perforated as with the "broad point of a countryman's staff," and it retained this appearance for several days."

"The hailstones too, had, from the strength of the wind, fallen at a considerable angle. Mr. Taylor was obliged to run from one room to another in his house, in order to avoid the fragments of glass, which were driven to the farther side of the apartment; and in his bed room the wash-hand basin, although standing at some distance from the window, was shivered into pieces by a hailstone.

"As the ice melted away, great numbers of small birds, particularly sky larks, corn buntings, starlings, and *chacks*, or wheat-ears, were found dead, and were collected in heaps by the boys belonging to Caithness' farm. On the shore, near to a point called Torness, were observed numbers of rock pigeons, hooded crows, *Tysties* or guillemots, and ducks, which had been killed at sea by the hail, and were left by the receding tide."

"Many wounded gulls and *picktarneys* or sea swallows were seen floating on the sea, occasionally attempting to fly, but unable to raise themselves."

"Owing to the thunder and lightning having for some time preceded the great fall of hail, the people at work, in the track of the cloud, had all taken shelter. One boy alone, named Peter Stevenson, suffered from exposure; he ran towards a projecting crag at the sea beach for protection: but before he could reach it he received a severe blow on the back part of the neck, which stupified him, and produced a contusion, from the effects of which, he had not recovered after the lapse of some months. Four men in a boat, at some distance from land, were opposed to a part of the shower, and had their hands much cut and bruised by the hailstones."

" It does not appear that the electric fluid had any share in killing the geese or other birds, at least no marks of discoloration were observable, and the palpable blows which they received were sufficient to account for their death. The cows being " struck yeld" as Caithness expresses it, seems a curious circumstance; it is ascribed by him to the dreadful fright they got. The wounds received by the cattle and horses were all evidently inflicted by the hailstones. It is proper to add, however, that, in some places, Caithness observed the surface of the pasture grass to be much discoloured and scorched-like : and a good deal of the broken straw of the grain crops was " coloured white by the fire as if it had been suddenly ripened." Mr. Taylor informs me, that when he first went abroad immediately after the cloud had passed over, he was not only sensible of a sulphureous smell, but that it was so strong that he had speedily to return for a draught of water, in order to remove the disagreeable sensation in the throat. He observed that the cattle afterwards avoided certain scorched parts of the pasture, which did not recover their verdure till repeated showers had refreshed them."

This terrible storm was very partial in its operation. It left a belt of ice which crossed the island from S.S.W. to N.N. E.

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Original Department.

OBSERVATIONS ON CHILDREN.

ESSAY THE FIFTH.

ART. 1. *On the effect of good and bad moral Treatment on the Health of Children.*

It is not to be supposed that the effects of education on the health of children are as great as those which follow proper or improper modes of physical education. Still they are important; and would be so even if it were only because they afford an additional reason, why a more philosophical attention should be paid to the education of children than has hitherto prevailed.

The absolute influence, however, of a bad education on a child's health is very great; for, since much of his future happiness depends on the principles which are instilled during infancy, so is the state of his health in infancy much more dependant on this circumstance than is commonly supposed.

It is of still more consequence to consider this point in reference to London children than to those who live in the country; because, from its being more difficult to preserve the health of children in London than in the country, a due attention to collateral circumstances is the more necessary.

Thus then, whilst it has been shown, that irritations of various kinds form the exciting and predisposing causes of all children's diseases, it will now be discussed, how the bad passions, which arise from a faulty education, may, and do often, materially influence the state of health in children; either by acting as any other irritating cause would do, or by increasing the effect of such irritations as may be present in the constitution.

They will do this, therefore, in two ways; first, by producing disorder directly, with or without the assistance of other causes, and secondly, by aggravating the danger of diseases which are already formed.

There are many ways, in which, the passions, by forming the exciting causes of disease in children, directly produce disorder; but it must be understood that this effect never happens, unless the constitution be in a state prepared to be thus excited.

For instance, if a child be in perfect health, he may have the actions of his body increased by the exciting power of the passions, without an attack of disease being the consequence. Of course, the truth of this is proved daily; and indeed, in many cases, where the system is sufficiently predisposed to take on a disordered action, mental excitation is not sufficient to turn the scale, and the child is saved from an attack of disease, from that cause at least. And it is well for us that such is the case; for since we find so few children who are taught to subdue their passions properly, and so few too, whose diet and the other parts of whose physical education are so well regulated as to preserve the balance-beam of their health motionless and at its due poise; the health of children would be precarious indeed, if the excitement of the passions were sufficient to overthrow the equilibrium, whenever the predisposing causes of disease are present. But it can easily be conceived that a child's system may be brought so near the verge of disease by the existence of that chronic state of disorder which has been so often mentioned above, that a much less efficient excitement than that of the passions may be sufficient to fire the train and produce an acute disease.

An abundance of examples may be given in illustration of the fact that this frequently occurs. Nay, it is even said, and on uncontrovertible authority, that convulsions have been occasionally produced by the violent paroxysms of rage which so often occur in children, whose passions are not kept within due bounds. I have never seen such a case, nor any person who has seen one; but to those who are accustomed to witness the violent and continued bodily exertion which infants display when they cry from passion, it will be abundantly obvious that such an excitement will be sufficient to produce an attack of disease if the constitution be properly predisposed to be thus affected.

In fact, exertions like this do often become the exciting cause of disease; much oftener than is usually supposed; and whilst the progress of the case shews, that a faulty moral education inevitably fosters the bad passions, it is equally apparent that a much smaller degree of the same care which is necessary to keep them in due restraint, would be amply sufficient, if properly directed, to subdue them altogether.

Thus, an infant is permitted to indulge his passions on small occasions;—he obliges his nurse to attend to him, or he finds, in other ways, that if he continue to cry, his wants will be supplied, however preposterous they may be. If he thus gain the victory on small occasions, as he and his nurse must be brought to issue every day, on more important matters of debate, one of two things must happen; either that he is indulged on all occasions, which is impossible, or he must be opposed, and successfully opposed, on some points.

In proof of this, will not every mother say, "Why, you know, it was impossible to let him do that, he would have scalded himself to death," &c. Certainly she will, but she cannot draw the conclusion, that if resistance be made successful in one such case, it may as well be made so in all, and great evils like these be avoided.

Parents, I say, cannot see this, and yet its truth is so apparent, that no intelligent person can be excused for not attending to it.

How then is it that conduct so inconsistent is permitted to pass by unheeded—unheeded, though it exerts so deleterious an influence on the present and future health and happiness of the children, who are subjected to its consequences? It is the want of firmness and rational consistency in nurses that makes these really trifling duties so difficult to be performed. The majority of even well-informed persons act too little from reason, and too much from feeling, to make it difficult to explain this curious circumstance. It is not wonderful then not only that nurses, the expansion of whose minds is generally so inferior, should err in this particular, but that their superiors should neglect to teach them how to act differently; and yet, as will be shown hereafter, it will be easy for parents to avoid all similar evils. Two things only are wanted—Let them first fix the proper principle of action firmly in their own minds, and then by obliging their nurses to conform to that principle strictly, the difficulty vanishes.

A single example may be indulged in,—The point of keeping children so much in the arms is discussed at large in a succeeding page. Now, why should a child desire rather to lie on the arm than on a warm bed or a cool mattrass?—Merely because he has been taught from the first hour of life to expect the former, or in other words, to like it better. But whilst it is evident, that he would as easily have been trained differently, if his parents had so willed it, it is equally so that the wrong choice has been made for him; for more pleasures and fewer inconveniences attend on the one than on the other, as must be apparent to all who think of it.

But to recur to the point from whence this digression arose. It is said, that the violent bodily exertions, which follow mental excitation, do frequently produce severe disorders, when the body is predisposed to be acted on by the causes of disease. A child, for instance, is weakly from chronic ill-health; he gradually becomes worse; he is more fretful, his cheek flushes, his breath is acid and disagreeable, his skin is hot and his tongue white. Medicine is offered to him by his mother, and she desires that he may be restricted in his diet. He will not take the medicine, and he succeeds in obtaining his accustomed quantity of food. Perseverance only produces more resistance; the system is more excited, the fever is increased, and thus an attack of infantile fever is produced, when, perhaps, a dose of opening medicine and abstinence from stimulating food for a day or two, would have dissipated these preliminary symptoms of disease.

Or the day is very cold, and a child is permitted to expose himself improperly; or, he does it in spite of opposition. An inflammation of the lungs is the consequence, and perhaps death follows; or the foundation is laid for future asthma or consumption.

It is points like these which form the very essence of preventive medicine, and a multitude of them will occur to the mind of every one on consideration.

In this way then, the bad passions of children tend to produce disease directly. Their agency in aggravating diseases when present, is equally important and is more easy to be perceived.

Indeed, there is scarcely any case of disease to which this indirect injurious effect of the want of a proper moral controul over the patient does not apply. It impedes the practitioner in his investigation of the disease; it always renders the application of his remedies in some degree hurtful, from the difficulty which is experienced in inducing submission; and above all, it too often prevents him from administering medicines altogether, even in cases where the life of the child is forfeited in consequence.

Few children will permit an examination to be made of their complaints; at least, without their fears or passions being so roused, as often to make the investigation unsatisfactory. This applies to infants as well as to children; for, it is a sure sign of bad moral management, when even an infant cries before strangers.

Hence, it scarcely ever happens that a child will take medicine without resisting; and the resistance is often so great as either to prevent the medicine from being given altogether, or to cause the loss of the greater part of it.

Again, how difficult it often is to prevail on a child to lie in bed; although many cases of disease occur, in which a due attention to the state of the skin forms a very essential part of the treatment; and therefore a continuation in bed is most advisable.

It would be very easy to multiply examples of disorders being aggravated by improper treatment of children with regard to their moral management. A few however may be mentioned.

It was not long ago, that a little girl became ill and feverish during weaning. Symptoms were present which led to an apprehension that her head was in some degree affected. Of course it was important to ascertain the truth of this; but it was almost impossible to do so, or account of the extreme irritability of the child's temper. She would not bear the presence of her medical attendants without crying violently, so that it was impossible to investigate the symptoms of her disorder with accuracy. No doubt, the irritability of this child's temper was materially increased by the peculiar tendency of her disorder towards the brain; but, if her moral education had been conducted on better principles no such aggravation would have occurred; for, her temper would not have been irritable.

Perhaps there is no single symptom which is so useful in the investigation of disease as the state of the tongue: and yet, it is the daily complaint of every medical man that children will not show their tongues. It is unimportant indeed, in the majority of instances; but, in more doubtful cases, the want of this sign may, and probably often does, lead a medical man to decide improperly on his patient's disorder.

It was only yesterday that a medical man found it to be impossible to give a child opening medicine: at least, he desisted, because though it was forced down, the whole was rejected by the stomach in an instant afterwards. Fortunately this is a case, in which abstinence will cure the disorder; but more time will necessarily elapse before the child is well, as medicine cannot be exhibited; and, it is necessary to add, that although this patient's obstinacy arose from very defective moral management, yet the practitioner felt convinced, that, if the child had been placed immediately under his own care, he could have secured, and even by the mildest means, within an hour, the object which he had in view.

The measles prevailed very much during November and December in 1820: and perhaps there is no disease in which a proper regulation of the temperature of the skin is so important as in this.

Certainly, many children were prevailed on to lie in bed. Indeed, every one must have observed, and fortunate it is that it should be so, that the tempers of children are frequently as it were reversed during an attack of severe disease. Although their temper may be irritable when in health, they become tractable and patient when labouring under an acute disease. It may be, that their feelings are so entirely changed, as to frighten them into submission to what they feel to be an overwhelming influence: it is often, that the disease naturally renders the child's faculties obtuse. However this may be, it frequently happens, as is observed above, that violent children are gentle and tractable when ill: but unfortunately it is not always so. Several children during this epidemic suffered relapses, on account of an improper exposure of their bodies to cold. One child, in particular, who had the disease favourably, suffered afterwards from this cause. He would not lie in bed; but was found every day with the upper half of his body uncovered. To avoid the evil consequences of this bad management, it was recommended, that a blanket, folded like a shawl, should be put over the shoulders and fastened round the neck by means of tapes. The blanket was even put on the patient by his medical attendant; but it was in vain. The next day it was all off, and yet the child was only two years old. Immediately on the decline of the eruption he had a severe attack of inflammation of the lungs, from which he narrowly escaped with life.

Another little boy did actually die in a second relapse of the same complaint, and under almost similar circumstances.

But a case, of the same kind, occurred some years ago, which, as it was peculiar in several respects, I will describe from the notes which were taken some time after the child recovered. It is the case of a little boy, an only son, and whose life was peculiarly valuable on account of some collateral circumstances. "He was a boy of great intellect, and as it afterwards appeared of an excellent disposition. His disease was the measles, and he narrowly escaped death, solely on account of the difficulties, which arose during the treatment, from the violence of his opposition to the application of every kind of remedy.

He could not be prevailed on to touch medicine, nor to have the slightest thing done to him by any mode of persuasion, or by such coersion as his friends would permit. He would, on no account, lie in bed; and although, bleeding and other remedial treatment were absolutely necessary to the child's safety, yet the bare attempt to put any proper measure in practice, produced a paroxysm of passion, which, whilst it far exceeded in violence any thing which I had ever seen, had no mean influence in aggravating that inflammatory state of his windpipe and other air passages which formed the dangerous part of his disease.

As the danger increased however, his medical men were, at last, allowed to use such coercive measures as enabled the child to struggle through the disorder, although his life was thus very nearly lost."

This case is particularly mentioned, because the boy afterwards showed how much might have been done for him by a different mode of treatment. He discovered great talents, and, by a few kind attentions, his confidence was, at an after period, gained.

The process however was an extremely slow one; but he was gradually brought to submit to restraint; and although it is even now almost ridiculous to witness the numberless reasons which he conjures up, why he should avoid taking medicine, or doing any similarly disagreeable thing; yet reasoning with him will always induce submission. Indeed, on such occasions as these, he has courageously held out his arm to be bled, merely on the faith of being told by one whom he knows has never deceived him, that he will be hurt a little indeed, but much less by so doing, than by using resistance to what is necessary to be done.

I have never yet known an instance, in which so much has been done in so short a time, by the mere circumstances of speaking truth to a child and reasoning with him kindly, so as to show that much interest is felt in his welfare.

It is hoped that this essay shows clearly, how much influence bad moral habits have in adding to and increasing the difficulties and dangers of childhood. It only remains to observe, that the evil does not rest here. Trace a child so educated until he become a man; and, setting aside the probability, which exists, of his health being ruined by the continuance of diseases which have arisen from this cause in childhood, it will be seen, that bad moral habits act as decidedly in inducing or aggravating disease in adult life as they do, before the period of childhood is passed. In such a man, the causes of disease are much more numerous than in one of correct habits. Nay, the effect is much more decided and apparent. A well regulated mind is as oil to the springs of life: it ensures peace if not happiness, and it has no mean influence in extending the pleasures which arise from health.

Art. 2. *On Warming Houses.*

How uneconomical we are in the article of coals! and yet, to such of us as live in London, coals are not of trifling consideration. It grieved us sadly, the other day, to pay about five times the original cost of coals which we bought in our own country, as the price of bringing them from the pit and laying them in our London cellars; and yet the price, after all was less than that of Newcastle coal. Our want of economy in the use of coals is made sufficiently apparent, by our ignorance of the best modes of warming houses.

An open fire-place is the worst possible way of warming a room: not only is the greater part of the heat permitted to escape up the wide chimney; but we, otherwise, do our utmost to neutralize the little which radiates into the room by suffering so much of the warmed air of the room to escape under the mantle-piece. How much this is may be seen by any one, who will hold a lighted candle just below the top of the opening into the chimney.

An open fire-place is indeed an abominable contrivance: it is almost the best invention for keeping a room cool. How our ancestors lived in their large open halls, with chimneys almost as large and as open as the halls themselves, it is difficult to understand. At all events we could not live in such places; and yet, with all our alterations and improvements, enough of imperfections remains in the construction of our fire-grates and fire-places to make us, if we think about it, ashamed of being so tardy in applying the lights of science to the elucidation of this interesting branch of domestic economy.

In winter we sit as close as possible to the fire; and yet we are only warmed on the nearest side. The other side is cold enough; the colder indeed the nearer we sit to the fire. The draught of the fire and of the chimney, for the latter is as great as the former, causes a general rush of the whole air of the room towards the chimney; and therefore as the currents from all parts concentrate themselves, the nearer they approach the fire-place, the motion of the air must become more violent and rapid, as it gets nearer to the chimney. Thus one side of a person who sits near to an open fire is almost frozen perhaps, whilst the other side is scorched.

These are great recommendations of open fire-places! but, the evil is so irremediable, that even the improvements which were made in their form by Count Rumford *—; improvements so

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* It is interesting to know that in one of the old walls of Tutbury Castle, where the Scotish Queen Mary was confined, a perfect specimen of a Rumfordized fire-place exists. It is low, and the back is a truncated cone. There is no chimney-piece, but the stone is tastefully cut round the opening into the figures of animals.

great, that they have been universally adopted throughout the country, have failed in obviating them to any great extent.

New ideas on the subject, however are getting abroad, and as the public mind has gradually ripened into a state for receiving and adopting the suggestions of science, when applied to practical purposes, the practice of warming houses in a more philosophical manner is becoming very general; at least of warming such large public buildings as experience had shown it was impossible to make comfortable on the old principles.

The plan is indeed extending itself to private houses; and, perhaps nothing but the fact of the common modes of application being improper and inefficient has prevented it from being much more widely extended than it is.

The only true mode of warming rooms is to throw into them the proper quantity of warmed air; not to heat the room by means of a stove, for that only burns the air and does not ventilate the apartment; nor to do the same thing by steam, for that is liable to a similar objection; but at once to warm and ventilate a room or a house, by supplying it constantly with warm air; for thus, ventilation is secured as well as warmth.

But although this principle guides all warmers of houses, by means of warmed air, there is a radical defect in the mode by which it is carried into execution in the majority of cases. Indeed, as far as we know, there is still, but one man who does it perfectly and properly. In his hands, warming and ventilating houses becomes a beautiful application of chemical and mathematical science to the common affairs of life.

Some commit the mistake of throwing into the room a small quantity of air heated to a high temperature; to one much higher than the required warmth of the apartment makes necessary. By so doing, they not only make the ventilation incomplete, but as the impurities, which always exist in air, are burnt and charred, an unpleasant smell is produced; and thus persons are necessarily deterred from using this excellent plan of warming and ventilating houses.

There are other points in which the common plans of warming houses by means of heated air are materially worse than Mr. Sylvester's; but it is sufficient to say, that in the latter gentleman's hands, the execution is at once perfect and invariably successful.

He calculates the number of cubic feet in the space to be warmed, and he throws in just as much air heated to the *required temperature* and no higher, as is sufficient to keep the room of that temperature, and to secure a proper ventilation.

In this way, the room is equally warmed and is thoroughly ventilated; there is no foul smell;

moreover, a very large space is thus made warm at an exceedingly moderate expense of firing.

Where houses are built with the intention of applying this plan of warming in perfection, tubes are built in the walls, and are made to open into the principal rooms.

But even in common houses, by placing a small warm-air apparatus at the bottom of the house, and making the opening into the hall, the whole house is very beneficially warmed. For, as each room is supplied by air from under the door, it becomes filled with warm air instead of cold; a much smaller fire is required in the grate; and even the open chimney is robbed of its evils by the air which passes away, from all parts of the room, by that aperture, being now supplied to the room by the accession of fresh warm air instead of cold air.

We shall again and again refer to these questions on domestic economy, for they are most important, in their operation on the health of mankind; and, by the rapid strides which science has lately made in remedying the domestic inconveniences of mankind, there are few departments of household management which have not lately been most materially improved thereby.

Amongst other branches of domestic economy, to the improvement of which science has been successfully applied, we may mention, the building of houses, warming all kinds of buildings, hot-houses included; cooking; washing and laundry work; cooling houses in summer; heating baths; lighting houses and the streets; and clothing: indeed the fund of subjects in this department of our journal is inexhaustible.

Art. 3. *On Breaking Bad Habits in Children.*

A little girl, fifteen months old, would not go from a particular person; and thus great inconvenience arose. On one morning however, it was necessary for her to be with her father who was in bed. She cried with great violence and threw herself as far out of his arms as possible. He took the hint; and, being desirous of getting up, let her roll on to the bed and turned her on her back. He then got up and dressed himself. Of course she cried as violently as before, and indeed cried all the time he was dressing, which occupied a quarter of an hour.

When dressed, he took her up in hopes that she had learnt that to be with him was better than lying on the bed; but no, she still cried and resisted as violently as ever. He therefore laid her on the hearth rug and only took notice of her by occasionally telling her she should come to papa when she was good.

Occasionally also he tried how the discipline was acting, by putting out his hand to her; but as if she was determined to shew that she understood the contest, she expressed her entire contempt of the offers by violent motions. She was therefore left entirely alone and after a while she became quieter and at last left off crying.

After she had remained quiet for some time, a new offer to take her was made and willingly accepted.

On the next day, when she was going to take her food, he took her again, and offered her the food: but she refused it, and began to cry. In about half a minute however, she recollected how unavailing opposition was, and perhaps a desire for the food played its part, and she left off crying.

It was not without considerable opposition that the father was permitted to give his child this salutary lesson. The whole house of servants thought he was very cruel, and the nurse came to him, making the most outrageous noise, and begging that she might leave the house rather than see the child murdered. Alas! for the ignorance of servants, and the supineness of parents in letting them thus do as they like.

Art. 4. *On the Treatment of Wounds.*

(CONTINUED.)

Our last Number contains the necessary directions for closing simple incised wounds so that they may heal with the greatest facility. But there is still another process by which such wounds are healed; and it is curious, that although the process is very complicated and tedious, the majority of wounds would be healed in that way, if left to be cured by natural means.

It so seldom happens that we can improve on the processes of nature by our artificial remedies, that we may fairly boast of the triumph of art in healing wounds by the first intention; that being the process which we have described in the last Number.

The lips of a wound naturally contract and are separated from each other. By overcoming this contraction, and placing them again in opposition, union takes place with great rapidity.

But what is better, the scar, which remains, is often a mere line; whilst by the natural process, a large surface of new skin is frequently left, which from its being essentially different to natural skin in its powers of life and in other properties, is at once an unsightly object, and a part that is very likely to give way and become an ulcer again, under favourable circumstances.

It is supposed, that in union by the first intention, a thin layer of coagulable lymph, or of that part of the blood which makes it sticky, joins the cut surfaces together; and that the whole is consolidated by the formation of new vessels, which strike into this newly formed matter. But if the lips of a wound be allowed to contract, a gap is left in the skin of greater or less extent and depth, and it is our intention to describe now the process by which the cavity thus formed is filled up.

A layer of coagulable lymph is thrown out by the divided arteries on the raw surface. If this exudation of lymph be examined on the next day, it will be seen that a multitude of vessels have shot into all parts of it, so that it will bleed freely if touched. It would seem, moreover, that each vessel has pushed itself so entirely through this layer of lymph as to raise itself into a little rounded eminence on its surface. Hence the sore is covered by small granular eminences, which are therefore called granulations. Besides this, the vessels acquire a power of secreting or forming purulent matter from the blood which circulates within them, so that the wound or ulcer is covered, as every one knows, by matter, as it is called.

When this first layer of granulations has been duly organized, a fresh crop is formed; and the process is repeated again and again, until the whole cavity is filled up level with the skin. A new process then commences. The surface of the granulation becomes covered by new skin; and as if to form a new triumph for our artificial mode of union by the first intention, the granulations, by contracting themselves, gradually draw the separated edges of the wound together, as if to obviate as far as possible the necessity for forming new skin.

We are ignorant of the mode in which this contraction takes place; but the wound is gradually closed, as the mouth of a purse is drawn together, and, at the same time, the edges of the old skin put on a new appearance They become smooth and rounded; the colour changes to a whitish tint from being red; and whilst this white edge extends itself and encroaches on the granulations, the smooth surface of new skin is seen gradually to enlarge behind it, and thus the wound is at last covered entirely over by a layer of new skin. In very large wounds, the skinning process often goes on in the centre of the wound as well as at its edges. Small islands of new skin form; and thus also, as well as by the contraction of the granulations, the cure is expedited.

The bust of Hunter is before us as we write, and we almost expect to see it frown on us for not having made these details intelligible to our readers. It was the celebrated Mr. Hunter who first described these processes; and though the general reader may think the recital of them tedious and unimportant, yet they are very interesting to medical men and as such we must be excused for entering into them. But as it is impossible to understand the natural cure of wounds without being aware of them; and, as ulcers are healthy or unhealthy, in a healing or a spreading state, according as these processes are carried on perfectly or imperfectly, even the majority of our reflecting readers will thank us for giving them something like a clue to the proper comprehension of the mode in which a very extensive and important class of diseases is cured.

It is now necessary to describe generally the more complicated kinds of wounds. The first class of complicated wounds however, the contused wounds, will demand a more full explanation.

Contused or Lacerated Wounds owe their peculiarity of appearance to the nature of the instrument with which they are produced. As an incised wound is made by a sharp instrument, a contused wound is caused by one that is blunt, or even has no perceptible edge. Thus, in the first case, the division of the skin forms the important symptom, for the skin itself is not further injured than by its division; whereas, in the second, the division of the skin is often comparatively unimportant, the difficulty of the case arising from the surrounding parts being materially injured by the weight of the falling body.

Hence, the class of contused wounds may be made to include contusions or bruises, where there is little or no division of the skin, as well as those cases in which the skin is cut or lacerated. At all events we shall discuss the subject of bruises in this place.

Contusions or Bruises are of daily occurrences. Some cases are indeed sufficiently unimportant; but others are very dangerous, and here, as well as in simple incised wounds, the situation of the bruise is of considerable consequence.

By the fall of a heavy body on the skin, or of a lighter one, if velocity be made to compensate for the want of weight, the structure of the part becomes considerably deranged; the nerves and other parts of which the skin consists are bruised or torn; and as the smaller blood vessels of the part are also torn, blood is poured out underneath the skin, thus causing the blackness or other discolouration which appears on a bruised surface. If a larger vessel be torn, it will sometimes happen, especially on the scalp in children, that a considerable swelling of the part takes place; a tumour is formed and this tumour consists of a mass of effused blood.

In ordinary cases of bruises also, some swelling is generally perceived; which arises partly from the effusion of blood, and partly from a more watry fluid being thrown out by the divided arteries.

After the lapse of some hours, inflammation occurs; and whilst the violence of this inflammatory action is in the combined ratio of the violence of the accident and the unhealthy state of the constitution, it sometimes happens, that the inflammation is necessarily followed by the death of some portion of the bruised parts. When this occurs, which is but seldom, the dead part separates from the living, and the wound becomes an open ulcer, which is cured in the way pointed out above.

The bad consequences of bruises are dependant on the situation of the bruised part as well as on the violence of the blow, and the state of the constitution. If a bone be immediately under the skin, the latter will, necessarily be more bruised than if a softer part were in that situation. Hence a blow on the head, or especially on the shin bone, is more frequently followed by inflammation and sloughing, than when it falls on softer parts of the body. Contusions and bruises of the joints too are often followed by dangerous consequences; first, because the bone is generally close to the skin; and secondly, because the joint itself is a bad part to be affected by inflammation.

The Treatment of Bruises is easily deduced from the above observations. The principal object is to avoid the consequent inflammation or to moderate its violence. Leeches applied to the part, effect this purpose very advantageously. They may be applied repeatedly. The bruised limb should be laid in the easiest position, and if the accident is violent, be kept at rest, Pieces of linen, dipped in cold water, or in salt or vinegar or spirits and water, or in goulard water, should then be applied and kept constantly wet and cold. It is useful also to recollect, that, whilst in all cases one double of linen is better than more, it is advantageous, when the inflammation runs high, to to let the linen extend far above as well as below the bruised parts; because, by cooling so large a surface, the increased action which is going on in the part will be the more quickly subdued.

During the night, a cold poultice, made by adding bread to any of the above forms of lotion, may be applied.

Although, in the great majority of instances, these cold applications are the best, yet cases sometimes occur, in which, from irritability of the constitution, the cold will not be borne; whilst the application of a warm emollient poultice or a fomentation will give great and speedy relief.

As the object of the above treatment is to allay inflammation, purgatives must be given, every day if necessary; low diet must be enjoined; and, if the symptoms of fever are at all violent, a moderate bleeding from the arm will be advantageous.

By such remedies as these, the symptoms of inflammation and fever will commonly be subdued in the course of three or four days; and then a new process may be begun with. For after the first inflammatory symptoms have subsided, as the part will still be discoloured, on account of the extravasated fluids under the skin, discutient applications, as they are called, may be employed for the purpose of promoting their absorption.

To be sure, the cold lotions which are applied during the inflammatory stage are essentially discutient; and therefore, more powerful remedies of the same kind may be used, and especially such of them as contain vinegar. Hence, sal ammoniac dissolved in equal parts of vinegar and spirits of wine forms an excellent application.

The stimulating liniments may be resorted to, such as equal parts of oil and hartshorn, or opodeldoc, or the compound camphor liniment. Pressure too may be advantageously made on the part by a roller and compress, preceded by occasional fomentations of hot vinegar.

In this stage of bruised limbs, the use of exercise is very advantageous; as it tends to strengthen the weakened parts and has a great effect in preventing them from swelling and becoming œdematous, as frequently happens when attention is not paid to this particular of the treatment. Pumping cold water on the bruised part two or three times a day is also an excellent remedy.

When the contusion is very severe, or the instrument which produced it is of a convenient shape, the skin is often torn or lacerated; and thus very disagreeable wounds are formed.

Contused Wounds are more formidable than incised wounds, because the skin is in almost all cases too much bruised to unite by the first intention.

It is right however, in every case, to draw the lacerated edges as near as sticking plaister, drawn moderately tight, will accomplish; and then, after securing the plaister by a roller, as moderately applied, the treatment for bruises which is recommended above may be resorted to.

In applying sticking plaister in such cases, care should be taken not to draw the strips tight and especially to leave sufficient intervals between them to allow of matter being conveniently discharged; for we have found it of considerable importance to leave the plaisters untouched for a considerable time.

A boy had the skin torn entirely off the back of his hand by being caught in a part of the machinery of a cotton mill. The tendons of the hand were laid bare; so that there was great probability of these parts, which do not bear being exposed to the air, mortifying and sloughing off. To prevent such an accident, which would have nearly made his fingers useless, it was important to avoid exposing the wound to the external air for as long a time as possible. The lacerated edges of the skin were therefore drawn gently together, and neither the strips of sticking plaister nor the rollers were removed for many days; not till long after the wound had begun to discharge matter very copiously. Convenient intervals were made in the roller through which the discharge passed; and, as plentiful ablution with warm water twice a day, secured the necessary observance of cleanliness, the wound was not opened until there was reason to hope that its surface had begun to granulate. When the plaisters were at last removed, the advantage of this plan of treatment became apparent; for the tendons were no longer to be perceived, the whole wound was covered by healthy granulations, and it healed without the patient losing the use of any of his fingers.

From this case, it will be perceived, that, where lacerated wounds are incapable of being united by the first intention, they become ulcers, as is explained in the beginning of the present article, and require to be treated like any other ulcers, by supporting bandages and such applications as will draw the edges of the ulcer closer together

It is not necessary to describe the peculiarities of either punctured wounds or gun-shot wounds; for, none but professional persons can manage such cases: indeed they form perhaps the most complicated states of disorder which fall under the surgeon's care. The danger of both punctured and gun-shot wounds arises from their being generally complicated by injuries of either the great cavities of the body, or of the arteries or nerves; and, from their being attended by a more violent consecutive inflammation than occurs in the case of incised wounds; whilst in gun-shot wounds the case is rendered more complicated by the contusion being so violent as necessarily to cause mortification and sloughing of the parts round the wound.

A few observations may however be made on the subject of poisoned wounds; because the milder kind of such accidents are of daily occurrence.

The class of poisoned wounds not only includes the severe and fatal states of disease which follow the dreadful bites of venomous serpents, the use of the poisoned daggers and arrows of savage nations, and the bite of rabid animals, but the less hurtful stings and bites of insects and the inflammatory tumours raised by nettles and other stinging plants.

The bite of the viper is the most dangerous of any poisoned wound from an animal, which is met with in this country, except the bite of a rabid animal. The bites of vipers are scarcely ever fatal, although, when the animal is vigorous, they are attended by much inflammation of the part, and by great constitutional derangement.

As it would appear that there is no specific remedy for the cure of these cases, they must be treated as common cases of disease, according to the degree of the external inflammation and of the internal fever. But, if some strong muriatic or nitric acid, or other caustic, can be obtained soon after the infliction of the bite, it may be advantageously applied to the very bottom of the little wound, so as to destroy the parts to which the poison has been applied, and thus to prevent its absorption.

In the cases of sting or bite by wasps or bees or bugs, or by stinging plants, the sedulous application of cold water, or of other cold lotions, so as to lessen the inflammation which necessarily follows the accident, forms all the required treatment; for oil or hartshorn or other supposed specific applications are alike useless and inefficacious. Mindererus's spirit, or vinegar, or spirit of wine and water, or brandy and water, form the best applications. It is sufficient to wet a shred of linen with any of them, or even merely to dab a little of them on the part occasionally.

Miscellaneous Department.

Art. 5. Review of

The Mother's Medical Assistant, *containing instructions for the prevention and treatment of the diseases of infants and children.* By Sir Arthur Clarke, M. D. &c. &c. London, small 8vo. pp. 1820. pp. 148.

Sir Arthur Clarke is a very assiduous author, he having presented three works to the public within a very short period. "An Essay on Bathing" appeared shortly before the present publication; and, a tract on the cure of cutaneous disorders by means of medicated fumigations, came out a few weeks ago.

As the present work contains some sensible observations, we shall recommend it to our readers by giving such as we approve of. The subject is an important one, as we have elsewhere attempted to show; and it is not the less so, on account of the very various and even contradictory opinions which are entertained and acted on by mothers in their care of infants and of children.

Our readers will perceive, on referring to Sir Arthur Clarke's little volume, that there are many points on which we do not quite agree with him; but as it is rather our object, to cull the sweets of the books which pass under our review, than to criticise their defects, we do not find fault with our authors, unless opinions are expressed which seem to be at once erroneous and likely to have a deleterious influence in practice.

The subjects discussed in the present volume, are, the treatment of new-born infants; the properties of milk and the diet of infants and of nurses; the effects also of heat and cold, and an account of the vital organs of infants. Some description is then given of the diseases of the skin and of the head; of the throat and chest; of the stomach and bowels; of the glands, the bones, and the nerves.

Of course these subjects are treated of in a very brief manner; the volume being much too small to allow of a more extended discussion.

Infancy, (the period before a child can speak) is said to be "the most critical period of human existence;" childhood on the contrary is said to be the most healthy. It is said too, and the observation is a correct one, that, "in infancy, the foundation of a good or a bad constitution is generally laid."

Diseases are said to be generally produced by mismanagement; for "healthy women will naturally bring forth healthy children." But, we should say, as all women are not healthy, so some infants are born with a greater predisposition to become diseased than others; and indeed it would seem, that in certain families, not the greatest skill is sufficient to preserve the children from the fatal effects of certain diseases. We have ourselves witnessed the death of the two last of twelve children in one family, all of whom fell a sacrifice in succession to one disease, consumption.

A little girl died not many weeks ago of an inflammation of the bronchial membrane, seven of her brothers and sisters having previously died of the same disease: and what shows most strongly the fatal tendency of certain constitutions to sink under the attack of certain diseases, is, that the children were treated by different and by very eminent men, and bronchial inflammation, although a dangerous disease, is generally cured with considerable certainty. Hence then it appears, that the best system of management will not always be sufficient to preserve life and health in children; but as Sir Arthur Clarke's observation applies strictly to the great majority of cases, it is therefore well worthy of being attentively considered.

In discussing the best mode of treating new-born infants, Sir A. remarks, that no means should be adopted to mould the head or any other part of the body to a particular shape, and that infants do not require oily or other purgatives immediately after birth.—" Strange," says he, " that we should evince such a distrust of nature, and presume to force in those operations, where human aid is so peculiarly unavailing."—Strange indeed we say in reply. He says too that breast milk, and if possible that of the child's mother, should be its only food, during the first month (we say much longer;) and that in choosing a wet-nurse a woman whose child is nearly of the same age as the one to be suckled should be selected.

The properties of human milk vary according to the time which has elapsed since the person's confinement. Our author therefore goes on to describe the properties of milk. He says milk consists of " an expressed oil, a coagulable matter, sugar and water." During the early months, the sugar is most abundant; afterwards, the coagulable matter increases in quantity; so that the milk, " by degrees, acquires a consistence, and furnishes a more solid aliment." We wish the authority for these facts had been stated.

Some women are unable to suckle their children, and

Sir A. Clarke discusses the causes of this peculiarity. The common sense of the matter is, that, with the exception of a very few women, who are too diseased in constitution to become good or proper nurses, all women might suckle, if they did not unfit themselves for the duty, by indulging in erroneous modes of life, by sacrificing their health to fashion, or to other more personal gratifications, and by mismanaging themselves in almost every way.

The milk of a nurse varies, however, according to circumstances; her diet, her temper, and her general habits exert a considerable influence on it; and therefore, it is not every woman's milk which will agree with every child.

A mixture of animal and vegetable food is recommended for the diet of a nurse.

As we have hinted above, we think that our author allows infants to be fed at too early an age. Let them have four teeth before the feeding is begun with, and the food then will probably not disagree with them.

The food recommended for infants is a jelly made by decocting bread in water, after all the alum has been soaked out of it; and this lowered to the consistence of barley water by the addition of a fifth part of fresh cow's milk, a little of "the best sugar," being added; as the infant increases in age, the proportion of milk is to be increased and that of the sugar diminished, until the stomach is enabled "to digest simple bread and milk."

Exercise in the open air and plenty of sleep are recommended for young children; the *proper ventilation* of nurseries also is insisted on. Daily immersion in *warm* water is likewise enjoined, and the evils of subjecting infants to too great a degree of cold, on the idea of making them hardy, are pointed out.

We shall not be able to allow much space for the author's discussions on the treatment of children's diseases; indeed as we do not always agree with his explanations of their causes, and as our opinions lean rather to the teaching of how diseases are to be prevented, than to how they are to be recognized and cured, on which subjects we find very little information in the present publication, we are the less anxious on the subject.

The directions for treatment are commonly judicious, but we would strongly recommend our readers not to attempt to carry them into practice, at least in cases of acute disease; first, because the states of disease, to which they are applicable, are not pointed out with sufficient distinctness to allow of the remedies being applied with judgment; and secondly, because the cure of no acute disorder should be attempted except in slight cases or in their early stages, by any, except medical men.

Our author must not think we wish to blame him particularly in saying this. Our readers know that, in our opinion, it is impossible to teach unprofessional persons how to distinguish and to cure diseases. We only find fault with all authors, who attempt to do this impracticable thing.

The general directions, however, which are given by Sir A. Clarke for assisting the operation of such more important and specific remedies as none but a medical man should meddle with, are plain, and may be acted on with great advantage to the little patients.

In the account given of the skin diseases of children, we cordially agree in praising the diligent use of warm water for the cure. The author recommends it again and again; and, we know, that whilst the majority of the chronic states of cutaneous disorders follow the want of cleanliness and general management in children, a return to the daily and abundant use of the warm bath and of warm water in every form will commonly render the treatment of such disorders a very easy duty.

We have not room to give further extracts from this work; and indeed, the details which follow of the history and treatment of internal diseases come especially under the remark which we made above. They are insufficient for being acted on with any chance of success. An outline like that is even far from sufficient for the information of commonly educated medical men. The acute diseases of children run so much into each other, and their peculiarities and the medicinal part of their treatment depend so much on minutiæ, which none but a person of educated and practiced observation can detect, that it is impossible for parents to treat them rationally. We do not say successfully, because fortunately for the world, the majority of all cases of disease tend to cure themselves; or rather, it is only in violent cases that the powers of the constitution are not sufficient to withstand the increased or diseased action which may be present, until the latter subsides of itself and the patient is left convalescent.

Such being the case it will be easily understood, that, people are frequently led to believe that they have cured a disease, when perhaps, not only they have not been instrumental in the cure, but the disease has actually subsided in spite of the remedies employed.

It is necessary to say, in conclusion, that the general directions which Sir A. Clarke gives, for the management of many of the diseases which he describes, are very good—much better than what are commonly found in books of popular medicine.

Art. 6. Dr. Williams on the use of *Colchicum* in *Chronic Rheumatism.* In the London Medical Repository, No. 90, for June, 1821, Dr. W. has published a second series of cases of chronic rheumatism, in which he found the wine or tincture of the seeds of the colchicum autumnale to be a safe and almost certain cure for the complaint.

His dose is a tea-spoonful at night, and about half as much at noon every day, increasing the strength of each dose to about double, if necessary, after a few days trial. In a few weeks the complaint is generally cured.

But, it must be recollected, that Dr. W. is very solicitous in recommending, that great care be taken of the diet during this course of medicine; otherwise, he says, in many cases the remedy will be unavailing. His plan of diet is to avoid every kind of indigestible and flatulent food, such as salted meats, vegetables, puddings, pies, and fruits, and restricting the drink of every kind to half the usual quantity.

Dr. W. recommends the same medicine as a cure for all chronic painful complaints, and he greatly prefers the seeds of colchicum as a remedy to any other part of the plant.

The bulb or root of the colchicum autumnale has been however used in medicine from the earliest periods: and within the last year it has become a favorite remedy, with many practitioners, for the cure of many complaints.

Some years ago, Mr. Want recommended it as a powerful remedy for gout and rheumatism; and indeed it is generally supposed that it forms the basis of the eau medicinale of Husson and of other empirical medicines for the cure of gout.

Since then, its use has, in a great measure, been restricted to cases of gout and rheumatism. But a few practitioners extended its application to the relief of other diseases, and now it is considered by many to be a remedy of very extensive powers.

The colchicum has been generally used in the form of wine, or of tincture, or of vinegar; but the powder of the bulb has also been employed, and we ourselves gave the result of an extensive experience of its use, in this form, some time ago.

It certainly appears to be a very peculiar and powerful medicine, and capable of being extensively employed in the practice of medicine; inasmuch as it seems to act as a sedative, at least as a controuler of those actions which are commonly known under the name of inflammation.

If future experience shall verify its power of curing inflammation, it may be indeed considered as a valuable addition to the pharmacopeia. Our most valued remedies against inflammation are but ill adapted for curing that state of disease. They do not act directly on the diseased part; the action is only indirect; therefore it is imperfect.

Bleeding, the best of them, is in this predicament. The direct action of bleeding is only to lessen the quantity of blood. Now, suppose, as often happens, that a person is apparently well to-day, and he is taken ill with an inflammation of the lungs to-morrow; in such a case, it will perhaps be necessary to take away several pounds of blood from the patient to save his life, and yet, the quantity of blood in his body must have been much the same just before the attack when the person was in good health, as it was afterwards when the disease had commenced. The bleeding therefore cannot be employed to lessen the quantity of blood. Some other reason must exist.

The truth is, that lessening the quantity of blood is the best mode we know of, to controul that ebullition of the circulation which forms the important feature of the inflammatory state. But, it is evident that this action of bleeding on the disease is only an indirect action; and it is moreover true, that it is positively injurious to the constitution to take away so large a quantity of the vital fluid as the blood is very properly called.

If such be the case, and as the same objection applies to the use of purging, the other great antiphlogistic remedy, we need not be told that a medicine which is safe and which acts directly on the circulation, so as to controul its increased impetus, must be of great utility. No unexceptionable one has yet been discovered, although many have been tried.

The colchicum autumnale however seems to possess many of the necessary requisites for such a remedy. Under proper management, it is a very safe medicine, and, in many states of inflammation, its action is very remarkable and decided: but its real value is still undecided; and much remains for us to discover, by attentive observation, respecting the cases to which it is more particularly applicable.

Many varieties of inflammation of the lungs seem to be very certainly and rapidly cured by it; fevers of all kinds are greatly under its controul; local inflammations yield to its influence; almost all the forms of disorder caused by an increased flow of blood to the head are decidedly relieved or cured under its use; very many cases of consumption are ameliorated during its exhibition; and the long list of chronic complaints, whether external or internal, which depend on inflammation or irritation for their cause, offers an abundance of examples of its beneficial agency. Children's fevers also, and several forms of puerperal inflammation may be included in the same list.

Such are some of the alleged virtues of the colchicum in the case of inflammatory disorders; but that it is not an infallible remedy is proved by the fact, that great care, respecting diet and general management, is as necessary during the exhibition of colchicum as of other antiphlogistic remedies, as Dr. Williams very justly remarks. Without this be attended to, the colchicum will fail as every other remedy has done even in very favorable cases; and therefore it is not a panacea or universal medicine which cures diseases under any circumstances, and in every body's hands.

We believe, that under the guidance of those who understand its use, it will be found to abridge the danger and duration of most diseases in a greater ratio than follows the use of other remedies; but this is all. Dr. Williams is a fellow of the Royal College of Physicians, and he lives at Ipswich.

ART. 7. In the British Review, No 34, there is an interesting essay on the great improvements which have lately taken place in the cultivation of METEOROLOGY as a science.

Doubtless, a knowledge of the changes which take place in the appearances of atmospherical phenomena, would, if it were extensive, be of essential service to mankind. It would further his interest and his happiness more than can readily be conceived.

Climates and seasons differ, and the weather of to-day, differs from that of yesterday. We can predict, that the climate of any country will continue to exhibit nearly the same peculiarities which has marked it in times past; we can anticipate that summer will be warmer than winter and that the present summer will bear some considerable resemblance to the one which preceded it: but no climate is marked by the same appearances at all times; no season exactly resembles the corresponding season of former years. The causes of even these varieties of appearance are hidden from us; and therefore, it may seem to be a hopeless task to investigate the causes which produce the daily changes of the weather which mark our inconstant climate. And yet all these seemingly capricious peculiarities of climate, seasons and weather are the result of certain natural laws, which are as invariable in their operation as the most immutable of nature's decrees are.

The science which investigates these laws is the science of Meteorology; and it is one which has not, until lately, been studied with the zeal which its importance demands; although, every people of every age have, in their predictions respecting the weather, attempted to observe its most manifest peculiarities.

The earth is surrounded by an aeriform fluid, which is some miles in depth and is called the atmosphere. Air, as we all know, is very sensible to the action of heat; it expands and becomes lighter when heated; and it contracts and becomes heavier as it cools. Thus then, while the distance of any country from the equator produces its climate, and the passage of the sun along the ecliptic, to speak in popular language, instead of the equator, the seasons; so, it is the action of the sun's rays, as also of the moon, on the atmosphere, and on the moisture that covers the surface of the earth, which gives rise to the whole range of phenomena which are classed together under the head of meteorology. Rain, hail, snow, dew, frost, the winds—these, in all their endless variety, owe their existence to the causes above described; and though the capriciousness of their occurrence is proverbial, yet, the order in which they succeed each other, is, in reality, invariable and immutable.

We should be able to predict these changes with certainty, if our knowledge of meteorology were perfect. Of what consequence is it then, that the succession of atmospherical phenomena should be laid open to us! and, hopeless as the task may appear to be, it cannot be doubted, both from the greater skill which certain persons, in all ages, have shown in predicting the weather, and from the advances which the science has made within the last few years, that the time will come, though we shall not live to see it, when mankind will know, not only what will be the great peculiarities in the weather of such and such years, but, in a great degree whether to-morrow will be rainy or clear, warm or cold, or be visited by an east wind, or by one from an opposite quarter.

The farmer and the sailor are able to do this even now, much more certainly than other people; to do it too, independently of the barometer and thermometer. Their interests have led them to observe accurately the appearance of the sky under every variety of ciscumstances; and thus they are enabled to foresee, frequently with great accuracy, the changes of weather and of the wind.

It is by patiently observing the succession of atmospherical phenomena, that our knowledge of meteorology is to be perfected, For many years, this has been done on a very extensive scale; new instruments have been invented for making the peenomena more apparent; and, though, in many important particulars, our observations are incomplete, yet a mass of facts with regard to the temperature and weight of the atmosphere has been accumulated, which, at once makes us intimately acquainted with thus much of the meteorogical history of particular places for many years back, and affords no inconsiderable data for foretelling the leading circumstances of the years which are to follow.

Professor Leslie, of Edinburgh, the celebrated traveller Humboldt, the late Dr. Wells and our present skilful Meteorologist, Mr. Luke Howard, have stood the most prominently forward as labourers in the obscure and apparently unproductive field of meteorological science—Leslie by inventing new and most ingenious instruments; Humboldt by his extensive and enlightened surveys of atmospherical phenomena in all regions of the earth; Dr. Wells, by his interesting verification of Leslie's deductions respecting dew, &c., and Mr. Howard, not only in having observed and recorded a multitude of meteorological facts as they occurred during the last many years in or near London, but in having given to the public, the results of his investigations in the form of a most valuable work, which he entitles, "The climate of London, deduced from meteorological observations made at different places in the neighbourhood of the metropolis." 2 vols. 8vo. 1818 and 1820.

We shall give some account of this work in our next number, introducing it however by a survey of the mode in which atmospherical phenomena are to be observed and registered, and of the instruments by which the task is facilitated and done more perfectly.

ART. 8. *On the insects which are hurtful to mankind.*

MESSRS. KIRBY and SPENCE, in their very interesting "Introduction to Entomology," clearly prove, that the insect-tribes, insignificant as they may appear to be, are deserving of very serious attention; not only on account of the curious particulars which may be collected respecting their natural history and general habits, but because several kinds of insects possess a very deleterious and occasionally a fatal power of injuring mankind.

It seems that insects attack us in many ways, but principally, as it appears, for three reasons. Some feed on our body; others only injure us in self defence; and a third set produce their injurious effects unconsciously as it would appear; that is they incommode us extremely by passing over the skin and in many other ways.

To the inhabitants of these islands the well authenticated accounts of extreme distress and even death being produced by the bites and stings of insects may appear to be incredible; but, in hot climates, such effects are produced almost daily. Even in this country however, the plague of insects is sometimes not a fable. How often do we meet with females, whose delicate skins are raised into tumours from the bites of insects, whilst the painful itching which accompanies these tumours is not allayed for several days.

The class of insects which live and feed on the human body contains many species. Some of these need not be detailed: the genus pediculus, of which there are several species that live on the human body, is well known, as are the two troublesome insects which infest bed-rooms that are not kept very clean. The acarus or mite is another genus of insects, several species of which are exceedingly troublesome and sometimes dangerous to the human subject, nay even many cases are on record, in which death has occurred from the existence of the morbus pedicularis as it is called.

Dr. Willan relates, that in one case of extreme itching in an old person, these animals principally infesting the skin of old paupers, "a number of small insects were seen on the patients skin and linen. They were quick in their motion and so minute that it required some attention to discover them." Severe cases of ophthalmia have been found, on the authority of Sir Joseph Banks, to be occasioned by insects of this kind establishing themselves at the root of the eyelashes. Dr. Mead describes "very minute vermicles" as proceeding from the breast of a suckling woman; and the probably true opinion that some kinds of the itch are occasioned by the residence of a minute acarus, hence called the acarus scabiei under the skin near the little pustules which form the ostensible disease may also be mentioned; whilst the accounts of very troublesome complaints being occasioned in other countries by insects burrowing under the skin are very numerous indeed.

Linnæus thought that many contagious disease were produced by acari; but this is doubtful; though not impossible, for many of the tribe are so minute as scarcely to be distinguished, unless by a microscope. "Dr. Mead, from the German Ephemendes, relates the miserable case of a French nobleman, from whose eyes, nostrils, mouth, &c., animalcules of a red colour and excessively minute, broke forth, day and night, attended by the most horrible and excruciating pains, and at length occasioned his death." The jiggers or chigoes of hot climates are almost equally hurtful in many cases; they pierce the skin of the feet and legs, generally beginning by inserting themselves under the toe-nails; and unless they are picked out, which the female West Indian slaves do with great dexterity, they often form abscesses, and even in some cases lead to a necessity for amputating the limb. The acarus autumnalis, or harvest bug, is so small that it would be quite invisible were it not for the colour of the insect being of the most vivid crimson colour. This insect, which is common in England, buries itself at the root of the hairs and produces intolerable itching. In Martinique, it is related, that soldiers attacked by a red insect of this kind had dangerous ulcers produced, so bad in some cases as to require amputation.

Thus it seems, that there are many insects, which actually take up their residence in the human body, and probably breed in that situation; just as horses and cows, and probably all other animals, are tormented by insects which at once live on their blood, and make their bodies a receptacle for eggs which are to become future insects of a similar kind.

In the next Number will be given an account of those insects which annoy us in other ways.

ART. 9. *On the comparative advantages of Oil and Coal Gasses for the purposes of Illumination.* By M. RICARDO, Esq.

THE results of Mr. Ricardo's observations are, "that the former is greatly preferable to the latter; that, on every point, in which I have examined them, it has the advantage; that it is much purer and better adapted for *every* purpose of lighting; that it is prepared with much greater facility; that it requires much less to establish works; that it may be produced more economically; and that it is also more advantageous in a rational point of view." These are high praises.—(Annals of Philosophy, No. 3.)

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OBSERVATIONS ON CHILDREN.

ESSAY THE SIXTH.

Art. 1. *On the different periods of Childhood.*

It has been the object of the preceding essays to point out the general circumstances under which disease takes place in children, the causes which lead to it, and some of the signs by which it may be detected.

It was necessary to give these preliminary dissertations before entering on the more practical part of the subject, in order that the rules for the prevention of disease and for the general management of children, so as to preserve their health, might be more easily comprehended and more readily acted on; since they would then appear to be, what it is hoped they are, deductions from the principles which had been laid down in former essays.

The present essay then will form the commencement of the more practical part of these observations on children, and it will be followed by others which will describe what appears to be the best mode of managing infants and children, as well as by some concluding ones, which will be dedicated to the consideration of the best general methods of improving the health of those children who may be suffering under the effects of improper physical and moral treatment, and of fitting them for receiving benefit from more rational habits of life.

In discussing the interesting questions which relate to the preservation of health in children, it will be convenient to divide the period of childhood into several portions. The subject indeed thus divides itself naturally. The processes of teething and of weaning for instance form landmarks, which cannot be mistaken; for the treatment, which is required at these different periods, is so modified by the existing circumstances, that it would only produce confusion if the whole subject were taken into consideration at once.

In the first place then we may divide the years of childhood into two periods; into infancy, and childhood properly so called; infancy comprehending about the two first years of the child's life, or until he have acquired all his teeth and can walk and talk—childhood, the years which intervene between infancy and puberty.

These periods differ much in their relative difficulties and dangers. Infancy, at least after the process of teething has commenced, forms perhaps the most precarious period of human existence; whilst childhood is perhaps the most healthy. It is true, that, generally speaking, those contagious febrile disorders which are emphatically called the diseases of childhood, occur during the years of childhood; and it is too true, that no one ought to feel secure that he will rear his children until they have had the measles, the scarlet fever and the small-pox, if the cow-pox be objected to. But although the occurrence of these diseases necessarily brings with it anxiety and dread, yet if due attention be paid to the preservation of health in children, if the constitution be invigorated and the mind in a well-regulated, tranquil state, the majority of children will escape these dangers of childhood.

To shew more plainly however the dangers to which children are subject during infancy it is further necessary to divide that period into three parts; namely, into infancy proper, or the period from birth to the commencement of teething, and into the periods of teething and of weaning. The first of these intervals is generally one of uninterrupted health. A mere infant is a very healthy creature; for with good nursing and proper food he is seldom ill. But he is surrounded by dangers during the periods of teething and of weaning. Affections of the head cut off multitudes of infants, whilst they are teething, and disorders of the intestinal canal, which also bring in their train similar affections of the head, and other diseases, form the difficulties which arise during the period of weaning.

Simple however as the objects are, to which the attention is to be directed during the first months of an infant's existence, yet those months constitute a much more eventful æra of human existence than is usually imagined. The years of life are linked together by an imperceptible bond of union; a controuling influence hangs over them which, taking its origin from the habits of body and of mind, which are formed during the period of infancy, makes each succeeding year, in a great degree, dependant on its predecessor, and fashions the mental and bodily powers, according to a standard which was erected almost at the birth of the child.

The habits of infancy are, in a great degree, the habits of after life. If a child be born of healthy parents and be itself originally healthy, just inasmuch as it is fed on proper food in infancy, as its moral education has been well conducted, as it has been sufficiently exposed to the air, and screened from being acted on by the causes of acute disease, so will the period of teething be passed without injury. Just also as the perilous process of weaning has been properly conducted and the child is afterwards fed and attended to on rational principles, will the system be strengthened, and fitted for bearing up against the curious and hitherto-unexplained tendencies to the attack of hereditary and other diseases, which mark the æra of puberty. And then, to the end of life, if he enter manhood with a sound constitution and a healthy mind, and if the same rational attention to the preservation of health and the avoidance of disease be continued, will it be found, that his pleasures and his pains, his falling into the grave, worn out by length of years and the consequences of a gradual but unavoidable decay, instead of perishing by a premature death, will be but as corollaries to the habits of his early life. Thus it is, that those seeds of evil or of good, which are sown in infancy, spring up before the years of childhood are even entered on, and are matured, in after life, under the form of a blighted stock or of a venerable tree, the pride of its congeners and the ornament of its race.

If the effects of early physical and moral education be so momentous, and, that it is so, with a few trifling exceptions with respect to acute diseases, reason and observation abundantly prove, what subject can bring with it more anxiety in the discussion than the question of the early management of childhood—mind and body, happiness and health, all have to be formed at that period, and all therefore are greatly dependant on the exertions and rightmindedness of parents and of those who are placed under them in the care of children.

Take the converse of the proposition. Trace the adult man down again into the child. If he be froward, if he be a valetudinarian, whose life is miserable from constant disorder, or if he be dying of consumption brought on by imprudence and excess, it will be found that he was froward from childhood, that the diseases which occurred at that period, from neglect, had laid the foundation of his present ailments, or that the irregularity of his conduct was but the natural consequence of his early misshapen habits. If he be healthy, on the contrary, and amiable and happy, he will have been so from his infancy, and he will have reasson to bless his mother and pour thanks into her ear rather than bite it off as the boy of old did with equal propriety.

The power of early care in children is however not omnipotent: it cannot avert the consequences of faults in the natural structure of the body; it cannot preserve a child or a man from the occasional action of such causes as are inevitably followed by disease or death, by unhappiness or perhaps infamy. But whilst such casualties are but the accidents of human life, a strict enquiry into all the circumstances of each case will show, that very many even of these exceptions, are exceptions rather in appearance than in reality; and, that with greater prudence, the want of which may be fairly attributed to early mismanagement, they might have been prevented from occurring.

Let it not be believed that, by pushing this argument of the responsibility of parents so far, it is intended to say that all these good consequences are in the reach of every parent, or that the corresponding evils can be avoided at will. The best of us, those who see its truth the most clearly, can reach but a very limited point in this race of well-doing: the foresight of mankind is still too imperfect to counteract by present measures the occurrence of all possible contingences; but by tracing the subject to something like its limits, a better view of the whole matter will be obtained; and thus, though we may be clearly led to perceive, that the ultimate aim of our wishes is unattainable, yet we shall be more likely to do all that is possible than if our view had been more confined and imperfect.

The period of infancy will be treated of in the next Essay.

Art. 2. *On the Peculiarities of the different Seasons of the Year as they affect the Health, and on their succession.*

It is intended to follow this essay, by an article on each month of the year, describing the seasons as they occur, hinting at the peculiar diseases which generally characterize each month, adding somewhat of the causes which give birth to those diseases in preference to others, and concluding by such observations as may lead the inexperienced to guard against such probable causes of disease and thus avoid injury from that quarter.

It is usual, in writing articles of this kind to describe the diseases which occurred in the preceding month; but it is preferable to anticipate, as it were, the coming month and describe the dangers which are approaching rather than those which are gone by. The articles therefore that will be given at the commencement of the different months were written at the end of the corresponding months of the past year; so that whilst as much care has been taken as possible, to avoid misleading our readers, by giving our observations, as they were suggested by the passing marks of the times, it will only be necessary to allow for such variations in the seasons and their corresponding diseases as arise from the varieties which characterise the natural order of atmospherical phenomena in different years. The filling-up may be somewhat different; but the outline will be the same.

Previous however to entering on these details, it will be useful, and certainly interesting to consider the year as a whole; to look on it as a ceaseless round of constantly changing circumstances; all of which produce a certain influence on the human constitution and many of which are most highly important in their consequences, if permitted to exert that influence uncontrouled.

So perfect is the circle of the year, that it is impossible to fix on any period of it which shall be better calculated than the rest for forming the starting place for our observations. The spring forms the most attractive season to the poet, and he instinctively begins by describing the wonderful delights of that wonderful season; but to us who have little more to enlarge on than the succession of the atmospherical phenomena, which mark the different seasons, one period is equally interesting with the rest and no one stands preeminently important.

Our business is with the atmospherical phenomena of the year, because from them spring the great bulk of diseases, and by their influence is the body modified as to its powers and is either predisposed to be attacked by certain disorders or is enabled to set the whole circle of complaints at defiance.

The phenomena to which we allude are the heat or coldness, and the wetness or dryness of the atmosphere. Just as these four qualities are present, either individually or in conjunction, so do the different seasons take their character and give birth to this or that class of disorders.

Wet weather is not particularly unwholesome, unless it be joined to a cold state of the atmosphere; but so deleterious is the junction of wet and cold that if it could be carried below the freezing point, which fortunately for a climate like that of England, cannot be, it would be unbearable.

Cold when joined to dryness of the atmosphere is genial enough; or rather it is very bearable and even pleasant.

Heat, is very detrimental when excessive; but when moderate it is not only agreeable but forms the most wholesome weather even when joined to a damp state of the atmosphere.

It will be easy to judge of the wholesomeness of the different seasons by a reference to these general principles; but it is very interesting to observe, how, what appear to be the accidental peculiarities of natural phenomena, neutralize, as it were, many of the evils which would result from the principles above described, if their action were not prevented by the circumstances of which we speak.

During winter, the air is cold; but as frost produces a dry state of the atmosphere, wintry weather is far from being unpleasant, and if proper care be taken, it is far from being unhealthy.

After a time, however, as the spring advances, the frost dissolves, the earth is unlocked, and the waters which were pent up therein by the frost being set free, the air has abundant opportunity of dissolving moisture; and, as the cold is still severe, this, joined with the moist atmosphere, produces disease more abundantly than occurred in winter. But see how the accidental circumstances of nature, as they are called, come in and ameliorate this evil: the March winds although cold and cutting, are at the same time so dry, that they are most efficaceous in carrying off this abundant moisture; and thus whilst they fit the earth for maturing the various productions of the vegetable world, they have no mean influence in warding off disease from the human constitution.

The East winds of spring however, in some degree, prove a bane as well as an antidote; for they greatly alter and in many ways increase the complaints of that season; but still they are very beneficial in thus removing the superabundant moisture of the atmosphere at a time when it is most necessary, namely, before the weather has become sufficiently warm to obviate the effects of the damp air

As the summer approaches, the East winds retire; and as now, the earth has lost much of its moisture, and as the heat has increased sufficiently to prevent injury even from its presence, disease gradually recedes also and the early part of the summer is an agreeable as well as healthful season. And, moreover, if the summer be not too hot, that period assists in forming a series of most healthy months, by running the mildness of the weather in June into the calm serenity of the temperate atmosphere of September. Thus, in a cold summer, the weather is not cold enough to allow of the diseases of cold weather being present, nor is it warm enough for those of hot weather to appear.

In hot summers, however, new trains of disorders arise, which form indeed, in their continuance, the chief part of the diseases of September; for unless bowel complaints existed during that month, it would be almost free from disease.

In October however, the weather becomes again colder, and in November, after the rains have fallen, a series of very uncomfortable and unwholesome weather follows. The unpleasantness of this weather increases, until frost appears; which, by robbing the atmosphere of its moisture, at once dissipates the evils now hinted at, as the pleasantness of our sensations at such seasons testify, when we compare them with those which are produced by the dreary heaviness of a November atmosphere.

In this way the dry coldness of winter is produced; and a fresh year brings with it a fresh succession of the same phenomena to be repeated year by year, until some great change shall take place in the nature of our climate, by which a new order of things will be created.

One observation on winter may be indulged in. How curious it is that the accidental circumstance of water in all shapes, becoming ice at a certain low state of temperature, should be so important! If it were not so every part of the globe except between the tropics would probably be uninhabitable; for if we may judge by the injurious effect of even the cold of November when joined to moisture, it is clear, that the temperature of winter would be unbearable, if the kind frost did not turn the water into ice and thus render the air as dry as it is in the height of summer.

ART. 3. *On the Bowel Complaints which occur in Summer and in Autumn.*

WERE it not for the prevalence of bowel complaints in summer and autumn, these seasons would be very healthy periods of life. The winter and spring bring with them fevers, inflammations and other severe diseases; but during the latter half of summer and the first month of autumn the body seems to enjoy its greatest immunity from disease.

It is probable from the temperature of the atmosphere being so equal during the twenty four hours that this season becomes so healthy; for it is not until the autumnal evenings begin to be cold, as contrasted with the warm and inviting serenity of the days, that slight fevers begin to show themselves, and colds become general, as if to usher in the more severe cases of disease which are to mark the wintry season which follows.

In discussing the bowel complaints of the warmer months, the first general observation which strikes the mind is, that they are commonly more prevalent in and after hot than temperate summers. We remember a cold summer three or four years ago, which was remarkably healthy; it seemed as if the weather was not cold enough to produce the disorders of spring nor sufficiently hot to engender the complaints of warmer seasons. On the contrary, the year of the rejoicings at the peace was a very hot one, and the bowel complaints were numerous and often bore an alarming character.

Again, are these disorders marked by any preceding symptoms, by which an attentive observer may anticipitate their attack, or do they come on with all their violence at once? They may always be anticipitated—and if so, they may generally be prevented. Let patients attend to themselves a little, and they will perceive that previous to an attack of bowel complaint, they will feel heavy and obstructed, and that slight pain, and distension will be felt at the upper part of the stomach. Flatulence also will be present; the appetite will be capricious and the food will disagree with the stomach. The secretions of the bowels too will probably be scanty and always unnatural; showing especially that the bile is formed in an insufficient quantity.

It is very easy to say what should be done under circumstances like these. Give the stomach a holiday; cease to put into it what it cannot digest; lower the actions of the system by abstinence, and if to this be added a dose or two of opening medicine, the cause will generally be removed and the complaint be prevented from occurring.

For, on further considering, how this obstructed state of the digestive organ is likely to proceed and to be relieved, it is not difficult to conceive, as the weather is probably not sufficiently cold or variable to produce an attack of inflammation of the liver or of other organs of the upper part of the intestinal canal, and also, as from the laxative nature of the food taken at such seasons, the internal membrane of the bowels is probably in a state of irritation, that an increased secretion of fluid from the latter membrane should be set up, as it were, for the purpose of relieving the oppressive congestion of the parts, or that the liver should take the alarm and pour out an inordinate quantity of bile, and thus free itself from the load under which it suffers.

Be this as it may, the general pathology of these complaints is as we have stated above. The liver gradually becomes deranged in its functions and the secretion of bile becomes obstructed, the internal membrane of the bowels is also in a state of irritation, and the increased secretion of fluid, the discharge of which constitutes the ostensible symptom of the disease, is induced, as the natural mode of relief for the obstruction by which it is preceded.

Generally, it is the bowels which commence this natural plan of cure, the first evacuations being usually deficient in bile; but whilst the complaint is sometimes merely bilious, that is, the liver is alone congested, and a proper secretion of bile cures the disorder, it is probably never cured, in any case, without the occurrence of this increased formation of bile; except indeed when the complaint is merely intestinal, that is when the exciting cause is an accidental irritation of the inner membrane of the bowels.

Now then, we can see, that the discharge is not the disease, but the cure of the disease; the symptom which shows, that the disorder has subsided or that its cause is in the way of being removed. The previous obstruction constitutes the disorder, the following discharge, the remedy.

A view like this explains many circumstances attendant on the complaint. It frequently runs itself off as it is called; that is, the increased secretion removes the irritating cause; and, as the discharge itself cannot go on if the irritation by which it was occasioned be removed, it also ceases and the complaint vanishes.

A multitude of remedies are given, for the cure of the disorder. These remedies are of various and even opposite kinds—purgatives and astringents, cordials and antiphlogistics.

At the commencement of the disorder, whilst the irritating cause still remains, a dose of opening medicine—the rhubarb and cordial confection of one practitioner or the small and repeated doses of epsom salts of another, or the large diluting draughts of chicken broth or warm water of a third, will be mainly sufficient in removing the complaint. If it have continued for some time however, so long perhaps, that the irritating cause is removed, and the system is left in a state of languor and exhaustion from the continuance or violence of the remedial discharge, we may understand how the chalk and opium and aromatics of a fourth medical man will stop the discharge by strengthening the debilitated bowels, and will at once dissipate the languor under which the constitution labours and cure the complaint. Or, to take a possible previous stage of the disorder, if, from some peculiarity of the patient's habit or from other circumstances, inflammation shall be actually present, as happens so often in the violent bowel complaints of hot climates, it will now appear, that for such cases, bleeding and similar remedies will form the best treatment.

How plainly does a statement like this show the difficulty, nay the impossibility of unprofessional persons engaging in the treatment of diseases, when the same apparent complaint is in reality so different at different stages of its progress and requires such opposite modes of treatment.

To prevent the occurrence of disease, by avoiding the causes which produce it, and to learn how to observe and cure these previous states of indisposition, which Mr. Campbell would call the shadows which the coming disorders cast before them—these constitute the best and indeed almost the only parts of medical science to which they can direct their attention beneficially.

Nevertheless, as the complaints, now under consideration, are often attended by very violent pain and great distress, and as therefore it is proper to run some risk for the sake of giving relief under such circumstances as these, it will be right to enter somewhat into the treatment of bowel complaints, especially as there is much of general management with regard to them which may be advantageously learned and practised.

It is evidently improper to give astringents at the commencement of a bowel complaint; for as the disease is generally set up for the removal of an irritating cause, it should not be interfered with until that good work be accomplished; and indeed it will be proper to assist nature by a dose of castor oil or other mild but effectual opening medicine, especially if the evacuations be lumpy or of an unnatural colour. Commonly, however, if the person abstains from all kinds of food and only drinks plentifully of warm fluids, such as barley water, very weak broth or even water, no further assistance will be required.

The diarrhæa itself is of no importance; it only becomes of consequence from the symptoms which its excess occasions, or from the pain and sometimes inflammation by which it is accompanied. Hence then when the bowels seem to have been fully evacuated, when fluids only and those in small quantities and with much irritation pass away, then an opiate is of great use, especially if there be much pain. Five drops of laudanum with twenty grains of Epsom salt in peppermint water or camphor mixture, or weak brandy and water, repeated two or three times, at intervals of four or six hours, will generally cure the complaint; or, where there is much pain or the sickness precludes the exhibition of fluid remedies, three grains of calomel with a grain of opium made into a small pill will generally be effectual.

The pain and sickness commonly cease and the complaint is cured.

If not, and the tongue be foul, the laudanum, joined to larger doses of Epsom salt, as a teaspoonful three or four times a-day, will, in the great majority of cases, cure the disorder; especially if abstinence from solid or indigestible food be strictly persevered in.

ART. 4. *Case of Fatal Relape in Scarlet Fever in consequence of eating two raw apples.*

A VERY lively boy was treated for an exceedingly severe attack of scarlet fever. He speedily became convalescent under the use of full purgatives; and he continued in an excellent state for ten days; when his father gave him two raw apples, which he eat. The fever returned immediately and put on the form of Typhus. Purgatives were given every day; but five or six days passed over before the apple was entirely expelled, and every piece was found so perfectly undigested, that it appeared just as when first eaten.

Some amendment took place; but after the exhibition of a very little broth, the symptoms were again lighted up and in a fortnight from eating the applies the child died, on Dec. 2, 1820.

This is not a solitary case. Dr. Armstrong says that he has seen many cases of relapse in fever, and some of death from eating apples, or the pulp of oranges or very often from broth.

The treatment of convalescence after fever requires much care and some skill. At one of the Irish hospitals, the physicians make it a rule to let the patients ask for food for a whole week before they indulge them with it.

ART. 5. *On the Care of Blisters.*

BLISTERS are a favourite remedy in the hands of many practitioners; and indeed, in the latter stages of acute complaints, where local inflammations exist, and in the treatment of many chronic disorders where the diseased action is kept up by the existence of a low degree of inflammation in any part, their use is often very advantageous to the patient.

A good remedy however is often of no avail from the ignorance of those by whom it is to be applied. Medical men are perpetually told, that "the blister would not rise;" when, in the majority of cases, the fault has not proceeded from the contumacy or even from the imperfection of the blister, but from the latter having been inefficiently secured in the required situation.

It is amusing in such cases as these to hear inanimate objects, rendered animate and endowed with wilful obstinacy, in order that they may bear the blame of certain errors committed by more responsible beings. "The poultice would not stick on Sir" is heard every day; and in like manner "it fell down and broke," or "it would go against the looking-glass" calls up a smile, in spite of the evil which the wilful top or stone has occasioned.

Blisters often will not stick on; and in such cases they are generally obstinate enough not to rise. It is hoped therefore, that this article will tend to teach the said blisters better manners; and moreover, that it will show them how they may manage themselves in many other respects, and be made as useful as possible.

The explanation of the beneficial action of blisters is founded on two laws: the one, that an inflammatory action cannot go on to any great extent, in dissimular parts of the body at one and the same time; the other, that certain states of the skin, from the intimate connexion or sympathy which exists between the latter and the internal parts of the body, have great influence in moderating or modifying the actions, of those internal structures.

The action of the first of these laws, is exemplied by the well-known fact, that two dissimilar diseases cannot go on at once in the human constitution. If a person be exposed to the contagion of the measles, and, within a few days afterwards, to that of the small-pox, the measles will appear first, and the appearance of the small-pox will be suspended until the former disease has run its course; when the latter will break out and proceed as regularly as if no interruption had been offered to its progress.

Nay, even modifications of healthy action will supercede, as it were, certain states of disease. Consumption is often suspended by the occurrence of pregnancy. The patient revives and seems even to recover her health. But it is only a deceitful calm; when the latter state has terminated, the disease re-appears, and then it generally runs on to a fatal termination with great rapidity.

The cases however which explain the action of blisters most perfectly, and which, indeed, probably gave occasion to their first being made use of for the cure of diseases, are those in which internal inflammations are relieved and cured by the occurrence of inflammation in an outward part. Inflammation of the vital organs contained in the chest or abdomen are often cured by phlegmons, as they are called, appearing on the legs or other parts; or by abscesses forming in the glands, or the occurrence of boils on the surface of the body.

If blisters be applied in imitation of these natural processes it becomes necessary, that the inflamed part shall be of dissimilar structure to that on which the blister is placed. These however are points which can only concern the medical man, at least at present, when popular medicine is so entirely in its infancy.

For the same reason, it will be improper to dilate further in exemplifying the second law mentioned above, or that relating to the sympathies which exist between the skin and other parts of the body. Not but that this latter subject will come again and again under consideration; since it is on the existence of the law now under notice, that much of the most effectual domestic management of diseases turns. The skin is the great organ for receiving impressions from many external agents which have great influence in producing disease; and when disease is actually present, there is no part of the treatment, which, in many cases at least, is so efficacious as attending to the state of the skin and properly keeping up its actions.

Blisters are generally spread on leather. Linen or even paper will answer the purpose very well. It is usual to cover the margin of a blister with adhesive plaister, to fix it more firmly on the skin; and it is obvious that this margin should be as broad as the nature of the part to which the blister is to be applied will admit of. Indeed much of the contumaceous disposition of blisters which has been alluded to depends on this circumstance. The margin is often left of an insufficient breadth, and thus the object of its being left at all is defeated. In some parts of the body however, as behind the ears, the margin can only be of a certain and that a small size; whilst, if the blister be placed between the shoulders or low down on the front of the chest there is not space to allow of the margin, on the sides of the blister at least, being of a sufficient breadth; but as in both these latter cases there is plenty of room, above and below the blister, it is advisable to request that the whole plaister may be so shaped as to allow of a sufficient extension of margin in those directions.

By attention to these particulars in spreading blisters, they may generally be persuaded to remain in their places for the required length of time; but, in default of this being done, the application of two long strips of adhesive plaister over the blister, crossing them on the middle of the plaister like the letter X, will perfectly answer the purpose.

Many practioners are in the habit of leaving no margin to their blisters, but of fastening them on by a second and a larger plaister of cap-paper spread with adhesive plaister. This plan answers very well; and indeed the strips of adhesive plaister above described may as conveniently be spread on such paper as on linen or calico.

A bandage is generally placed over the whole, or what is more convenient, if the blister be applied to any part of the body, a belt of linen broader than the blister and kept from falling down by shoulder-straps of linen sewed to it. A belt of this kind answers very well for securing any kind of plaister when applied to the body: it may be made long enough to go more than once round the body if it be desirable, and the ends may be secured by tying them behind or over any more convenient part, or by means of a needle and thread, or, worst of all, by pins.

If the blister be placed on any part of the body which lies hollow, it will be convenient to place a sufficient number of folds of linen under the belt to fill up the space, and thus to press the whole surface of the blister close to the skin.

It will seldom happen that a blister will fail to rise, if due attention be paid to these circumstances. It should however be moderately warmed immediately before its application, and as it is advantageous that the body should be at rest for some time afterwards, bed-time is the most convenient season; especially, as then, it is reasonable to hope, that part of the pain, which attends the rising of the blister will be passed in sleep.

Blisters commonly begin to rise in a few hours after application; and in particular habits much pain is experienced before the process is accomplished. When once it begins however, it is soon over; and, when completed, the pain commonly ceases. It is probable that this happens, partly, from the bladder of water having separated the irritating plaister from the surface of the skin, and partly from the secretion of the water having emptied the blood vessels of part of their contents, thus relieving the inflammation which the flies had occasioned.

Blisters generally form a large bag of fluid, which is transparent like water; but which is not water, for if a little of it be boiled over a candle in a spoon it will be seen to coagulate on being heated to a certain point, and to form a stiff opake jelly. The bag is formed by the separation of the cuticle or scarf-skin from the true skin or cutis, which lies beneath, and the same thing takes place where blisters are raised on the skin by traps or pinches, or by immoderate friction.

In some cases, these bags or blisters are not formed, but it would appear as if the cuticle were separated into irregular layers by the gradual insinuation of the water into its pores, and that thus, a great number of small blisters is formed instead of one large one; or, in other cases, the skin seems as if it were raised into a confused elastic quagmire.

In this latter case, it is impracticable to let out the fluid by any number of punctures; but where one large bladder only is formed, a snip with a pair of scissars on the most depending part lets it all out, and the cuticle falls, in a wrinkled mass, on the skin beneath.

Some art is required to do this neatly. It is unattended by pain, but without care be taken, the fluid will wet the patient's linen and otherwise make him uncomfortable. If the patient can sit up, the fluid may be caught in a saucer, or in any other convenient vessel; but when he lies in bed, it is the best to place a soft towel, folded several times on itself, or a moistened sponge under the part where the incision is to be made, and thus the fluid will be absorbed and these inconveniences averted. If several blisters be formed, each of them must be opened in the same way; but if the skin be only puffed up into a confused mass, nothing more can be done than to open the largest bags and let the remaining fluid be gradually dissipated by evaporation or otherwise.

Blisters may be opened as soon as they have fully risen; they may then be dressed; or if they have only risen in part, the water may be evacuated and the blister be suffered to remain on for a few more hours.

The mode of dressing blisters varies according to circumstances. If the first action only of the blister be required, it will be sufficient to puncture the bag and then to apply a piece of linen considerably larger than the blistered part, spread with spermaceti cerate, or with white wax and oil melted together and beaten up, while hot, with cold water or with rose-water. The cuticle which falls on the raw surface when the fluid is discharged, forms the best application in this case; because it keeps out the external air, and the irritated skin soon heals, a new cuticle being speedily formed, in place of the one which is lost.

But, if it be advisable to make the first irritation as great as possible, and thus to increase the quantity of discharge, the separated cuticle should be raised up and cut off by means of scissars, the same dressing being applied. Or, if more discharge still be desirable, though it be not wished to keep the blister open, as it is called, it will be proper to dress it for the first two days either with savin ointment or spermaceti ointment, with one-fourth part of blistering ointment mixed with it, and afterwards to use plain spermaceti ointment as before. By so doing, a great discharge is induced, which will continue for a few days and then the part will heal.

If the blister be ordered to be kept open, these stimulating ointments must be used as the common dressing twice a day, for as long a time as it is thought necessary to keep the blister open.

Generally speaking, blisters should be dressed twice a day, or oftener, if the discharge be very great. If much irritation exist and the part be hot and inflamed, it may be soothed, before dressing, by the sedulous application of warm water or milk and water; or, wet cloths may be applied over the dressings, either warm or cold, according as the one or the other is more soothing to the patient; or, in bad cases, a poultice may be applied over the dressings or on the inflamed part itself.

Blisters are often very troublesome and even painful after the part has healed. This arises from the old cuticle having become dry, and by remaining on, producing irritation on the tender skin beneath. It will be sufficient to soften and separate this dead cuticle by means of warm water or oil, and to keep the part soft and supple by applications of the same kind.

It sometimes happens, that no effect is produced by the application of a blister, even when great care is taken in applying it properly. The blistering ointment may be bad, or, as more frequently happens, the skin is torpid, or, in other ways, indisposed to be acted on. In the former case, nothing can be done but to change the ointment; in the latter, if twelve hours have elapsed since the application, the blister should be removed, and the surface of it changed by scraping it with a warmed knife; the skin should then be well cleaned by the use of warm water and soap; and then, if it be rubbed with spirits of turpentine, or salvolatile, or hartshorn until it be red and the blister be reapplied, success may be reasonably expected to follow.

It only remains to say, that some practitioners object to the use of blisters altogether, considering that they are often dangerous, especially to children, and that in most cases other remedies, which are equally effectual, may be substituted for them. There is indeed some truth in these opinions. Great caution is required, more than is usually supposed, in using blisters for the cure of children's acute diseases. The skin and constitution of children are often very irritable; and undoubtly, death has occasionally followed the use of blisters in the acute diseases of very young children, the part having sloughed and the child been cut off by the consequent irritation, this arising from the irritable state of the constitution produced by the disease.

Blisters therefore should not be unnecessarily recommended. Neither should blisters be incautiously applied in the last stages of fevers, or of other acute complaints of adults, where the system is reduced to a state of great weakness; for evils of a similar description have often arisen under such circumstances; but, with these exceptions, they may be not only safely used, but will often be followed by effects which scarcely any other remedy will produce. And indeed, as the bad consequences, above described, arise from the occurrence of inflammation, they may often be prevented, if the directions, given above, for the after-treatment of blisters, be faithfully acted on.

Miscellaneous Department.

ART. 5. REVIEW of

An ESSAY of HEALTH and LONG LIFE. By GEORGE CHEYNE, M. D. F. R. S. 2d Ed. 1725.

IT would appear that Dr. Cheyne was a very good as well as learned man. He was much celebrated as a physician a hundred years ago, at which period he lived, and the simplicity and profoundness of the present work show that his talents were very great, whilst the elegance of his taste and his kindheartedness are shown by the eloquent style in which the book is written, and the philanthropy which appears in every page.

We shall extract very largely from the practical part of Dr. Cheyne's work. The theories, which it contains, are of course obsolete, and would tend only to mislead; but its practical precepts are so rational in themselves and so clearly expressed, that we invite all invalids, and such as labour under chronic complaints in general to peruse them with attention, and we are sure that great benefit may be derived by following the instructions which are thus laid down before them.

Dr. C.'s book indeed, seems to contain almost all that has been written subsequently on the preservation of health, for it comprises almost the whole of the principles which guided Mr. Abernethy in writing his admirable treatise on the disorders of health.

Dr. C. was himself a valetudinarian; but this his last work was written at the request of his friend Sir Joseph Jekyll, who was, at that time, Master of the Rolls; although by the following extract, he intends to benefit others, who, as Sir Joseph Jekyll did, labour under bad health and require instruction as to the best mode of reacquiring their lost comforts.

"I have indeed," says Dr. C. "long and often observed, with great pity and regret, many very learned, ingenious, and even religious persons, who being weak and tender (as such generally are) have suffered to the last extremity for want of a due regimen and diet, and other general directions of health, who had good sense enough to understand the force and necessity of such rules, valued health sufficiently, and despised sensual gratifications for the pleasures of the mind so far, as to be able and willing to abstain from every thing hurtful, deny themselves every thing their appetites craved, and to conform to any rules for a tolerable degree of health, ease, and freedom of spirits; and yet being ignorant how to conduct themselves, from what to abstain and what to use, they have suffered even to mortal agonies; who, had they been better directed and instructed, had passed their lives in tolerable ease and quiet. It is for these and these only, the following treatise is designed. The robust, the luxurious, the pot-companions, the loose, and the abandoned, have here no business; their time is not yet come. But the sickly and the aged, the studious and the sedentary, persons of weak nerves, and the gentlemen of the learned professions, I hope, by the divine blessing on the following treatise, may be enabled to follow their studious professions with greater security and application, and yet preserve their health and freedom of spirits more entire and to a longer date. I am morally certain, had I known and been as well satisfied of the necessity of the rules here laid down, thirty years ago, as I am now, I had suffered less, and had had a greater freedom of spirits than I have enjoyed. But every thing is best as it has been, except the errors and failings of our free wills. (Pref.)

" Most men," says Dr. Cheyne, " know when they are ill, but very few when they are well. And yet it is most certain, that it is easier to preserve health than to recover it, and to prevent diseases than to cure them. Towards the first, the means are mostly in our own power; little else is required than to bear and forbear. But towards the latter, the means are perplexed and uncertain."

For these reasons, he writes his Essay on Health and Long Life, in the hope that the experience which "a crazy constitution, original weak nerves, dear-bought experience in things helpful and hurtful and long observation on the complaints of others," might have taught him how to teach others, " some of the most effectual means of preserving health and prolonging life in those who are tender and sickly, and labour under chronical distempers."

Dr. C. divides his work into observations, on " 1st. The air we breathe in; 2. Our meat and drink; 3. Our sleep and watching; 4. Our exercise and rest; 5. Our evacuations and their obstructions; 6. The passions of our minds, and 7. On subjects which come not so naturally under any of these heads.

He however deprecates the idea of man's living by rule. " He who lives *physically*, says he, must live miserably." " It is as a poet expresses it to die for fear of dying." No opinion can be more just. Medical men are much misapprehended when they recommend their friends to live by rule and diet themselves strictly. They never desire a man in health to do so; they are wisely content in such cases to point out that excess is to be avoided. But, it is to the " tender and sickly " and those who " labour under chronical distempers " that regimen and strict attention to all the juvantia and lædentia, or pros and cons of well-being are applicable: for, unless these be attended to, health cannot be recovered nor long life attained.

On the other hand, Dr. C. is very impressive in his reprehension of those of us who " cut off our days by intemperance, indiscretion and guilty passions, to live miserably for the sake of gratifying a sweet tooth, and to die martyrs to our luxury and wantonness." For, says he, in another place," he that wantonly transgresseth the self-evident rules of health is guilty of a degree of self-murder;" and again, he says, with much acuteness, that such conduct forms a moral crime; for, "the infinitely wise author of nature has so contrived things, that the most remarkable rules of preserving life and health are moral duties commanded us; so true it is that godliness has the promises of this life as well as that to come."

There is much that is sound and warm-hearted in these and others of Dr. Cheyne's preliminary observations, whilst the last remark on the connexion between health and moral conduct is at once striking and well worthy of serious consideration.

1. Of *Air*. After showing how peculiar states of the atmosphere influence the condition of the body, Dr. C. says that, " the healthiest situation for a seat is in a champaign country, or on the side of a small eminence, or on a gravelly soil, with a southern or western exposition, sheltered from the north and east winds, distant from any great concourse of waters, or any great mines or beds of minerals, where the water is, sweet, clear, light, soft and tasteless."

" All high mountains are damp;" " all great hills are covers for reservoirs of rain water. The clouds are but great fleeces of rarified water sailing in the air, sometimes not many yards above the champaign country; and these high hills, intercepting them, they are compressed into dew and rain, and are perpetually drilling down the crannies of the mountains into these basins. Hence the origin of rivers, and fresh water springs."

In speaking of the winds, he says, with great truth, that,

"The most frequent and pernicious in England, are the easterly, especially the north-easterly winds, which in the winter are the most piercing cold, in summer the most parching hot." "From the end of January till towards the end of May, the wind blows almost perpetually from the eastern and northern points if the spring is dry; and from the southern and western points if the spring is wet; and generally from the setting in of the winds on a new moon, you may predict the weather of the spring, &c." Hence he remarks that "tender people on the setting in of the easterly and northerly winds, ought to change their bed-rooms for others of westerly and southerly lights, and the contrary in wet seasons;" and also whilst "the dark, dull, foggy weather lasts at London in winter, tender people and those of weak nerves and lungs ought either to go into the country or keep much at home in warm rooms, go early to bed and rise betimes."

2. *Of meat and drink.*—"Our bodies," says Dr. C., "require only a determinate quantity of meat and drink to supply the expenses of living; and a just proportion of that to these would very probably preserve us from acute, most certainly from chronical distempers, and enable us to live without much sickness and pain, so long as our constitutions were originally made to last."

The lapse of a hundred years has added nothing to these sentiments: they comprise, in one sentence, almost the whole code of corporeal ethics and form a text, of which the most comprehensive discourse on the art of preserving health would only form an extended commentary. The quality of the food is not adverted to;

but if the body be in health and the food be sufficiently nutritious, the quality forms but a subordinate feature of the argument; at least all that is not comprised in the axiom above described.

Dr. C.'s discussion on the relative digestibilities of the different kinds of food is not so good as the general enunciation of his principles. It is disfigured by the erroneous pathological principles of the day; and is rendered nearly useless from the value of different foods, being regulated by a reference to the theoretical standard of the viscidity of the animal juices and the quantity of acrimonious and corrosive salts which they contain.

Hence we find that Dr. C. places the various kinds of food in a different order as to their relative digestibility than the increased knowledge of more modern times has shown to be the correct one; we shall therefore refer to our review of Mr. Carlisle's work for the present opinions on that subject, and quote another most valuable paragraph with which Dr. C. closes his dissertation on the kinds of meat and drink.

" I add nothing," says he, " about cookery. Plain roasting and boiling is as high as valetudinary, tender, studious, and contemplative persons, or those who would preserve their health, and lengthen out their days, ought to presume on. Made dishes, rich soup, high sauces, baking, smoaking, salting, and pickling, are the inventions of luxury, to force an unnatural appetite, and increase the load, which nature, without incentives from ill habits, and a vicious palate, will of itself make more than sufficient for health and long life. Abstinence and proper evacuations, due labor and exercise, will always recover a decayed appetite, so long as there is any strength and fund in nature to go upon. And, tis scarce allowable to provoke an appetite, with medicinal helps, but where the digestive faculties have been spoiled and ruined by acute or tedious chronical distempers. And, as soon as tis recovered to any tolerable degree, nature is to be left to its own work, without any spurs from cookery or physick."

An enumeration follows of persons who have lived to a great age, and it seems that in all of them the diet was spare and of the most simple kind. One of this author's observations is very curious. Hermits and ascetics are proverbial for being aged, and he alludes to several such persons who lived to great ages on bread or roots and water only. He allows a man in health to take eight ounces of flesh meat, twelve ounces of bread or vegetables and about a pint of wine or other generous liquor in the twenty-four hours. But the valetudinarians and studious or idle people are desired to lessen this quantity.

In the treatment of the diseases of Englishmen, Dr. C. says that while the great majority of them arise from repletion, evacuations are the best remedies. But, says he, " any one may lose a pound of blood, take a purge or a sweat by dropping the great meal, or abstaining from animal food and strong liquors for four or five days, in chronical cases, as effectually as by opening a a vein, swallowing a dose of pills or taking a sudorific bolus." This is excellent sense. However he recommends, with lord Bacon, "frequent family purges," and, with respect to certain persons, he agrees in the truth of Sir Charles Scarborough's string of alternatives in his advice to the Duchess of Portsmouth. " You must eat less, or use more exercise, or take physick, or be sick."

Men who are engaged in studious professions, may be sure that they have exceeded the proper quantity of food to be eaten at one meal if they are " unfit for the duties of their profession after an hour's sitting quiet to carry on the digestion."

In discussing the articles of drink, Dr Cheyne remarks, that pure water is the best beverage and the only one which is required to keep a person in good health. " It has been an agreeable appearance to me, to observe, with what freshness and vigour, those who, through eating freely of flesh meat, yet drank nothing but this aliment, have lived in health, indolence and cheerfulness to a great age. Water alone is sufficient and effectual for all the purposes of human wants in drink. Strong drinks were never designed for common use: they were formerly kept, here in England, as other medicinals are, in apothecaries shops, and prescribed by physicians, as they do diascordium and Venice-treacle, to refresh the weary, to strengthen the weak, to give courage to the faint-hearted and to raise the low-spirited."

Dr. C. then enumerates the diseases which are produced by an improper indulgence in strong liquors; and, he concludes a spirited appeal, on the subject, by the following eloquent passage:—" Happy those, whom, their parents, their natural aversion to strong liquors, or whom kind Providence among the better sort, has brought to the age of maturity and discretion without dealing in or desiring any great quantity of strong liquors: their passions have been calmer, their sensations more exquisite, their appetites less unruly, and their health more uninterrupted than any other natural cause could have produced. And thrice happy those who continue this course to their last minutes:"

He also says, from experience, that any person may suddenly leave off his wine without injury, however much he may have taken or for however long a time. But it must be remembered, in saying this, that he allows a certain quantity of wine to every body.

" Wine," says he, " and all other strong liquors are hard to digest," and he inveighs against the practice of drinking such liquors to help to carry off the indigestible food which may have been taken. It is contrary to nature and so far from being beneficial that, " 'tis lighting, as the saying is, the candle at both ends." " Water," he goes on, " is the only universal dissolvent or menstruum and the most certain diluter of all bodies proper for food." Tea and coffee are neither praised nor blamed. Excess in either of them is reprehended, and it is very shrewdly surmised that warm water is almost as beneficial a stimulant as either of them. Chocolate is " too heavy for valetudinary persons."

Dr. Cheyne allows as much as three pounds of liquid to be taken in the twenty-four hours ; but less to those who have weak stomachs, and he recommends that the drink be taken after eating rather than during the meal. We beg leave to say, that, in our opinion, no person whose digestive organs are debilitated can take with advantage so much fluid as is here allowed ; perhaps very little more than half as much. Dr. C. recommends the drink to be taken warm.

(To be continued.)

Art. 7. *On Meteorological Instruments and especially those invented by Mr. Leslie.*

In our last number, we stated the importance to mankind of meteorology as a science. It now remains to show, how the observance of atmospherical phenomena may be facilitated by the use of instruments, and how much the science is indebted to Mr. Leslie for the new instruments which he has added to our former stock.

We can all feel when the weather is warm; and also, that the atmosphere is heavy or light under certain circumstances. But, without the aid of the thermometer and of the barometer, our ideas on either subject would be very vague and inaccurate.

The *thermometer* marks the absolute temperature of the atmosphere near its own situation; the *barometer* indicates the density or weight of the atmosphere, and by peculiar contrivances respecting the thermometer, the instrument is made to register the highest or the lowest point to which the temperature has been carried within a certain period of time.

A third instrument is the *hygrometer*, which measures the dryness or dampness of the atmospheric air. Hygrometers are commonly very inefficient and defective instruments; Mr. Leslie however has described an improved hygrometer, which is very philosophical in its construction and efficient in practice. It " consists of a simple differential thermometer *, with one of the balls covered by tissue paper, for the reception of pure water when it is to be used. The degree of cold produced by the evaporation of the water (marked by the descent of the liquid in the opposite stem) is directly proportioned to the dryness of the air and continues to be so under all circumstances." Mr. Daniell also, has constructed a very good hygrometer; but it is rather more complicated than that invented by Mr. Leslie

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* Mr. Leslie's differential thermometer " consists of a long, slender glass tube, terminated at each end by a globular ball, and bent somewhat into the form of the letter U. Each ball contains common air insulated in its own proper ball by the intervention of a coloured fluid which occupies a considerable portion of the connecting tube and rises in some degree into one of the balls. The application of a certain degree of temperature to *one only* of these balls will, by contracting or expanding the included air elevate or depress the coloured fluid in the opposite stem, and thus afford a measure for detecting very minute variations of temperature.

The fourth instrument is entirely invented by Mr. Leslie and he calls it the *pyroscope*, or indicator of the heat of a fire. It is merely a differential thermometer, one ball of which has a covering of gold leaf. If placed before a fire, as the covered ball is not affected by the radiant heat, the action of the latter is marked by the expansion of the air in the other. It therefore measures the radiant heat which the fire gives off.

The fifth instrument, the *photometer* measures the quantity of light. It is a differential thermometer with one of the balls blown of black glass. The illuminating power of the air, and therefore the brightness or dulness of the weather is shown by the photometer; these qualities being occasioned by the "relative quantity of indirect light, reflected from the sky", and the instrument "detecting the slight alterations of temperature which it (the reflected light) occasions". Light has much influence on the ripening of fruits and the growth of vegetables; and therefore the photometer is a useful instrument.

The sixth instrument is the *æthrioscope*, or a pyroscope "so varied as to be free from the influence of light and wind during its employment. Its use is to measure the degrees of *cold* shot down from the upper atmosphere, which it does by being simply exposed under the open sky." In other words, it shows the comparative temperature of the upper strata of the atmosphere as it refers to that of the lower strata.

The seventh instrument, and the last invented by Mr.

Leslie, is the *atmometer* or indicator of the velocity of the wind. The evaporation of exposed fluids is in the direct ratio of the velocity of the wind and the dryness of the air; therefore as the atmometer consists of a porous earthenware ball with a wide tube attached to it, if the tube be filled with warm water it will run into the ball, and then if two atmometers be used, one sheltered and the other exposed, or if an atmometer and hygrometer be used in conjunction, the two instruments will "ascertain the velocity of the wind in a very accurate manner."

Two essential meteorological instruments still remain to be mentioned, namely, the rain guage and the weather-cock.

By means of these instruments the heat, weight and dryness of the atmosphere may be measured; and the quantity of light which exists in it, the relative temperature of its upper and lower strata, the velocity and direction of the wind and the quantity of rain which falls, may be estimated.

The use of them, besides being so pregnant with valuable information, forms an excellent mode of employing young people. The necessity for observing and recording the results at stated periods, teaches them accuracy and regularity, and the exercise is of great use, as it at once accustoms them to interrogate nature in her numberless beautiful aspects, and leads them insensibly to the study of higher branches of science.

The son of a friend of ours asked his father for a watch. Certainly you shall have one, was the reply, and it was procured. But, the father said further, a watch is valuable; and as you will feel that you deserve it better, and will probably take more care of it if you have earned it, the watch shall be hung over the chimney piece, where it will be for your convenience, as well as for that of the rest of the house; but, it shall not be your own, until you have made a perfect written series of thermometrical and barometrical observations for half a year. The boy entered on his task with alacrity, and regularly made the proper entries three times a day until he earned his watch. That watch will be doubly valuable to him, and he has gained much useful information by performing the task by which he acquired it.

We must defer the consideration of Mr. Howard's observations on the climate of London to our next number.

Art. 8. *Longevity in Russia and France.*

As connected with a former article, we are glad to extract a more perfect account of the interesting document published in the first number on this subject. It is communicated by Mr. Carlisle to the Philosophical Magazine, No. 274.

" In all Russia, in the year 1817.

Born 786,810 male.
711,796 female. } 1,498,606, or 41,000 more than in 1816.

Died 423,092 male.
405,469 female. } 828,561, or 8178 more than in 1816.

Of which under 5 years, 208,954!

Died, males of more that	60	years of age	68,723
	70		38,764
	80		16,175
	90		2,108
	100		783
	115		83
	120		51
	125		21
	130		7
	135		1
	140		1

Of females, no return.

Greatest number of deaths (children excepted) between 60 and 65 years.

Born 670,045 more than died.

Married 339,069, or 9,836 more than in 1816.

At 60	to 70 years every (circa)	6th man.
70	to 80	11
80	to 90	26
90	100	207
100	115	540
115	120	5,097
120	125	8,296
125	130	20,147
130	135	60,442
More than	135	423,092
	140	423,092

As a contrast to the above, we insert the following—France, by the last census, and by documents furnished by the Board of Statistics, contains 29,217,405 souls. Births in Paris 1819—24,344; of which 8,641 were natural children: deaths 22,072; including 351 children who died of the small pox; still born children 1352; marriages 6,236. Population of Paris 713,765.

ART. 9. *On the economical and medical Use of Hops.*

By Dr. IVES, of New York.

DR. IVES has observed that the leaves which form the flower of the hop as used in brewing do not constitute the efficient part of the plant; but that the bitter, aromatic and narcotic principles of the hop reside wholly in an impalpable yellow powder which may be obtained by sifting the common hops.

This powder, which Dr. I. calls *lupulin,* he says "has generally been mistaken for pollen; but it is peculiar to the female plant and is probably secreted by the nectaria. By careful management six pounds of hops will yield one pound of lupulin; and when used in that proportion the latter produces all the good effect of hops, whilst the remaining hop leaves are entirely inefficient. Dr. I. states that this powder is generally thrown away by the brewers.

When used medically, the lupulin must be treated differentlyaccording to the intention with which it is prescribed. Its tonic and stomachic qualities reside in an aromatic and a bitter principle, both of which are imparted to water as well as to alcohol; whilst its narcotic or opiate quality is found only in a resin, which is soluble in alcohol, but not in water. Therefore an aqueous infusion should be used where the narcotic principle is not desirable; and the tincture, made of spirit of wine, and not of proof-spirit or brandy, when it is.

The hop is a good stomachic and an agreeable and efficaceous anodyne, which acts without interfering with the functions of the bowels as opium is so apt to do. —(*Annals of Philosophy*, No 3.)

ART. 10. In the Annals of Philosophy, No 3, an interesting account is given of *three steam engines* which have been erected to drain copper mines and are of much larger dimensions than any other yet employed. The cylinders are 90 inches in diameter and the gudgeon of the beam bears a weight of 200 tons, which moves through 240 feet in every minute. Each bushel of coals is made to raise 38,500,000lbs. of water.

ART. 11. MR. FEETHAM's *improved plan of Sweeping Chimneys.*—A detailed account of this improvement, which we mentioned in our first number, may be found with plates in the Transactions of the Society of Arts, Vol. 37.

Art. 12. In the same volume, page 151, *a repeating alarum* is described by Mr. Thos. Taylor; which possesses the useful peculiarity of "discharging twenty or more alarms during the night at any particular times required." It was invented for astronomical purposes; but, as almost every one who trusts to the common alarums for being called up in the night have been disappointed in their use, this invention will probably be gladly adopted by those who know how useful the early hours of the morning are; but who still do not feel it strongly enough not to require an alarum to awaken them at the proper time.

No. 7, of this Journal, will be published on the first of September.

END OF VOL. I.

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A MONTHLY JOURNAL

OF

POPULAR MEDICINE;

EXPLAINING

THE NATURE, CAUSES AND PREVENTION OF DISEASES,
THE IMMEDIATE MANAGEMENT OF ACCIDENTS,
AND THE MEANS OF

PRESERVING HEALTH.

CONDUCTED BY

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Art. 1. *September.*

When we enter on the month of September we have arrived perhaps at the pleasantest month in the year. The violence of the summer heats has diminished, and yet, a sufficient degree of warmth remains to make a continuance in the open air very desirable; and the more so because our pleasure is not lessened at that season by the winds which prevail in the corresponding months of spring, the atmosphere being at once calm, clear, and agreeable.

September is perhaps the calmest month in the year; it seldom rains, there are no sharp winds, as happens in spring, and the thunder-storms which so frequently occur in July and August have disappeared with the hot weather by which they were probably produced.

If such be the case, September ought to be a healthy month; and so indeed it is, although not so healthy as we might reasonably have expected it to be. The fruits of Autumn give a tendency to complaints in the bowels; whilst, the evaporation of stagnant waters, by giving rise to those half dry, half wet meadows which we call marshes, favours the formation of agues, in such situations as abound in fens and marshy places. The increasing cold too of the evenings and mornings produces occasional cases of that slight feverish complaint which we call a cold; and every now and then, a more severe attack of inflammation of the lungs occurs, such perhaps as to lead us to anticipate the more severe forms of inflammatory disease which ought to arise only in the succeeding months, or the fevers which are at that time to prevail.

It will be seen from this statement that but few directions are required for the preservation of health during September. It is generally supposed, however, that the fruits of Autumn are more likely to disagree with the constitution than those of the Summer months; and, the plum especially is considered to be more deleterious than the apples and pears and wall-fruit which accompany it. It is true, that the cherry with the majority of people bears almost as bad a character as the plum; but the currant and the gooseberry, the strawberry and the raspberry are considered to be wholesome, and indeed experience proves that they may be taken with more impunity than the fruits which have been before mentioned. The reason of this perhaps is, that, though they may not in reality be more digestible than the fruits of autumn, they produce less inconvenience to the constitution; because the latter is then in a more proper state for receiving such kinds of food with advantage. At the commencement of summer the system is, as it were, more braced by the atmosphere of winter and spring, and by the drier food which necessity obliges us to take at those seasons, so that the cooling fruits of summer act beneficially by producing a more open state of the bowels, and thus freeing the constitution from that oppression which is so commonly generated by the artificial ways of civilized life. But then, as the powers of digestion are perfect in but very few of those who live in countries so far advanced in luxurious habits, as Great Britain is, it is not wonderful that a continuance of watery and innutricious food like fruit, should, towards the autumn, be the exciting cause of bowel complaints, to which the constitutions, mentioned above, are sufficiently predisposed by the continued and relaxing heats of the summer season.

But perhaps after all, excepting in aguish countries, the most fertile source of disorders in the month of September is the difference of temperature between the middle of the day and the morning and evening. For, as has been frequently repeated, it is the variations of temperature which produce disease, rather than the steady continuance of either a high or a low degree of heat; and therefore, when we find the dews heavy, as they always are in September, we should be cautious how we expose the body too suddenly and without a sufficient quantity of clothing to the great decrease of heat in the atmosphere, of which those dews are an unerring sign. And therefore, though in the evenings of July and August, it is not dangerous to sit in the open air with the head uncovered, and with but little more than the common in-door clothing on, the same thing cannot be done with impunity in September; and it is the more necessary to give this caution, because as the days are sufficiently delightful, and entice us to linger in the open air rather than sit in a close room within-doors, we may easily be betrayed into exposing ourselves to the chills and damps of the evening, and thus give rise to a complaint, which, with a little more care, we might easily have avoided.

OBSERVATIONS ON CHILDREN.

ESSAY THE SEVENTH.

Art. 2. *On the management of the first period of Infancy.*

Infancy, as has been explained above, comprehends the interval between birth and the time when the child can walk and talk and has cut his first set of twenty teeth. It may be divided into three periods; namely, into infancy proper, teething and weaning. Infancy proper generally terminates about the seventh or eighth month, when teething commences, and the latter is commonly completed by the end of the second year, the process of weaning usually taking place at some period within this interval.

Although the first months of infancy are, in general, under proper care, months of perfect health, yet, as some observations above attempt to show, it is a very important period of human existence; for the physical and moral habits which are generated in that interval exert an evident and commanding influence over the individual during the remainder of his life.

The general principles, on which a child should be treated during this first period of infancy, are very simple and easy to be comprehended. Let him live on the food which nature has provided for him, let him be warmly clothed, let him have plenty of air and exercise and tepid bathing, and let his moral habits be fashioned after a rational standard. These form the basis of good management during infancy, and it is hoped that by a little explanation it will be seen that they can be easily as well as successfully carried into practice.

Of the care of a child immediately after birth.—An infant, as every one knows, cries when it comes into the world. It would seem that this takes place for the purpose of securing a full inflation of the lungs, without which of course respiration would be imperfect and the child's life would be endangered. Hence, if an infant do not cry immediately after birth, it forms a reasonable ground for apprehension either that the child is still-born or that some obstruction to the passage of the air into the lungs exists.

It is necessary to give here some general instructions as to the proper treatment of cases like these, because although the presence of a medical man may make them unnecessary in the majority of cases, yet, as females are frequently delivered with only the assistance of incompetent attendants, a little knowledge on such matters may occasionally be the means of saving a child's life.

When an infant then, does not cry immediately on being born, an attendant should examine the navel-string. If it pulsate, the child is alive; if not, it is either dead or the functions of life are suspended, the cause of this suspension being, that the navel-string has been accidentally pressed on for too long a time during the birth.*

On further examination, if the child's skin be found to be of a bluish colour, but otherwise apparently healthy, it is probable that the functions of life are only suspended, and then the means of resuscitation, described below, are to be put in practice; but if the infant have been long dead, it will be made apparent by the cuticle having peeled off at various points, the stomach being swelled and dark coloured and by the presence of other signs of putridity.

If the navel-string pulsate however, and especially if the child move, it is probable that phlegm in the throat prevents the passage of air into the lungs; and it will be easy to remove this phlegm by passing the little finger fairly into the throat through the mouth and hooking it up. The child will receive no injury by this operation, and as it will probably struggle, that very irritation will often be sufficient to make it breathe. If these plans do not succeed, it will be necessary to close the infants nostrils and to blow strongly into the mouth. If still no effect be produced, a vessel of warm water must be procured and when the navel-string has ceased to pulsate, but not till then, the child must be separated from the mother in the way which will be immediately described, and the process for resuscitating still-born infants be promptly put in practice.

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* The reason that pressure on the navel-string produces death or apparent death, is, that the navel-string forms the bond of connexion between the mother and child: through its vessels, not only does the latter receive its nourishment, but these vessels, at the same time, constitute the medium, by which the blood is passed to and fro to be purified, in the same way that the blood is purified after birth, by the process of respiration. Hence, if continued pressure be made on the navel-string, so as to obstruct the circulation of the blood through its vessels, death takes place as certainly, and in as short a time as it is produced by hanging or drowning, or by the passage of the air to the lungs being stopped by any other means in after-life.

To tie the navel-string and *separate the child,* it is necessary to procure two pieces of small tape, each about six inches long, and having a knot at each end, or what is better, two strings of the same length made of about twelve threads of cotton or other thread, each having a knot at both ends, and after tying one of them very tight round the navel-string, with a double knot, at about an inch and a half from the child's body, and the other, in the same way at about the same distance from the first, to cut through the navel-string between them by means of a large pair of scissars. The knots at each end of the ligatures are very useful; for as the strings are generally wet, they become so slippery, that it is difficult to tie the knots tight enough to stop the circulation and prevent the occurrence of bleeding afterwards, without this support for the fingers.

In resuscitating still-born infants, three circumstances are to be attended to; the heat of the infant's body is to be preserved, the lungs are to be inflated and stimuli are to be applied to the child both inwardly and outwardly before as well as after it has begun to breathe.

The best way of preserving the heat of the body is by immersion in warm water in a convenient pan or foot-pail. The water should be of about 97° of heat, or if a thermometer be not at hand, as warm as is agreeable to the human body; and indeed it is a good rule to have a supply of hot water ready whenever the birth of a child is near at hand.

The mode of inflating the lungs is, to insert a quill into one of the nostrils (the child being up to the neck in warm water), to close the mouth and the other nostril, and to blow into the quill till the chest is distended with air, an assistant being directed to press the trachea or windpipe to one side as it runs down the middle of the neck, so as to prevent the air from going down the œsophagus and distending the stomach and bowels as well as the lungs. When the lungs have been thus fully distended, the air must be forced back again through the child's mouth by gentle pressure on the chest, and this process of filling and pressing out must be alternated in quick succession until the child begin to show signs of life, or until it is useless to continue the process longer.

If life return, it is shown by the colour of the skin becoming first, from being blue, of a bluish red and afterwards of a more vivid red, by the heart being felt to pulsate feebly, and lastly by the child moving its limbs and making spasmodic efforts to breathe. The pulsation of the heart is the first symptom which takes place, but it often happens that the complexion will be seen to change before this can be perceived; and therefore after that has occurred, the child may be expected to give a convulsive sigh. He then remains again motionless for some seconds, when the sigh is repeated again and again, the interval between each sigh becoming shorter and shorter, until the breathing is perfectly established and the child recovers.

After the child has breathed once, it is advantageous for an assistant to rub a little spirit of hartshorn or sal volatile on the hands, and to let the child draw in the stimulating fumes when it next breathes. This will often produce a cough and expedite the full establishment of the breathing*.

Many infants are in this way snatched from death; but in the great majority of births, the child either cries at once, or, by a convulsive effort of its own or by external assistance, the phlegm is removed from its throat and respiration is established. Nurses are then, in general, very solicitous to put a flannel cap on the child's head lest it should take cold. It would perhaps be difficult to say why the head should be more liable to be affected by the cold air than any other part of the body; but it will be sufficient to wrap the child up in flannel after it has fairly breathed and cried, and has acquired a red colour of the skin instead of that darker bluish tint which it possesses when first born: it may then be laid on the bed in a warm place, and if a sufficient aperture be left for the infant to breathe through, it will not be necessary to pay further attention to it for some time.

It will generally be convenient however to employ the time which elapses between the birth and the mother's being removed into bed, in washing and dressing the child. Warm water should always be used in washing an infant; and whilst the water is clean its eyes should be well washed by means of a soft bit of linen. After this, soap and flannel may be used liberally to the rest of the body, two precautions being necessary; namely, to perform the washing in a warm part of the room especially in winter, and to take care that none of the soaped water be permitted to run into the infant's eyes.

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* It has been recommended in these cases to use a more stimulating air such as oxygen gas in inflating the lungs; also to employ galvanism or electricity. The first of these suggestions is probably a good one; but it will so seldom happen that the necessary apparatus is at hand, that it is almost nugatory to mention it.

It sometimes happens, that the white pasty secretion by which the child's body is covered, adheres so firmly to the cuticle, that it cannot be removed without using more force than is consistent with the tender state of an infant's skin. It will be better in such cases to let some portion remain, as it will be gradually removed in a few days, although nurses say that the skin is sore if this be done. An old soft napkin is the best towel for wiping the infant's body dry.

In dressing the baby, nurses are always solicitous, as it is remarked above, to keep the head covered, and the double cap and the piece of flannel sewed in the inside to cover the natural opening at the top of the head form no unimportant part of the paraphernalia. Now there is no necessity for this piece of flannel, and indeed more than a single cap is equally unnecessary. Why, as has been asked above, is the head more susceptible of receiving injury from cold than other parts of the body? Let a satisfactory answer be given to this question and the practice may be continued; but since it will commonly be found that the custom has descended by tradition, and that neither nurse nor parent is able to give *a reason* why the necessity should exist, it will be better to hear what anatomy says on the subject. The more blood is sent to any part of the body the greater are the powers of life which reside in that part. Therefore as the head in children is very abundantly supplied with blood, it is, in reality better adapted for resisting the usual effects of cold than almost any other part of the body is. It would be much better and more reasonable to put more clothing on the hands and feet than on the head; for as those parts are the furthest removed from the heart or centre of the circulation, the powers of life residing in them are not so strong as to make such an artificial mode of warmth unimportant, especially in cold weather.

The proper care of the navel-string is generally considered to be very important: but it is really not so. Nothing more is necessary than to wrap a bit of soft rag, singed to take off the napp, round it, so as to separate it from the child's skin, and to lay it upwards on the stomach; a roller being passed round the child's body so as to secure it in its place.

The rest of the dressing is still too complicated; although it is indeed greatly simplified since the time of our ancestors, when the child was swathed and confined by a quantity of clothing which must have interfered with its growing properly and been otherwise very inconvenient. The different items of petticoats, stays, shirt, and frock, must be very unnecessary when a species of dress might easily be contrived which would comprise the advantages of all these different articles, and yet be put on at once and with little or no trouble to the infant.

The principal uses of clothes are to preserve the warmth of the body and to defend it from the inclemencies of the seasons. The use of the different articles of clothing is to fulfil more conveniently certain minor requisites or supposed requisites of clothes. So warmth is fully obtained by the use of flannel; but as flannel next an infant's skin would probably produce irritation, an inner garment of fine linen or a shirt is interposed; and, as some pressure of the body is supposed to be required, stays are added; whilst as an ornamental covering for the whole the frock follows and completes the catalogue, except indeed that a pinafore is often added, although a young infant ought to have but little use for such an article of dress.

There would be no impropriety in these several articles, if it did not put the child to inconvenience and irritate him to put them on seriatim: but this is a considerable evil; for, as preserving a child from irritation is as a corner-stone in building up a good disposition, and as the operation of dressing forms one of the greatest causes of irritation to which a child is subjected, it should be simplified by all possible means.

This may be done by making the whole of a child's clothing in one piece. Let the basis be flannel, the inside muslin, and the outside of any convenient ornamental material; let there be a body made up to the chin with sleeves; let the dress be open behind but wide enough to allow of a considerable wrapping over except at the upper part above the shoulders; and then, if the part which corresponds to the child's waist be so extended on one side as to go any required number of times round the body, and if this extended part have a second slip of the same material sewed at a convenient distance from the end, so that it may be turned back and passed the contrary way round, it will meet the first, and may be tied so as to fasten the dress on the child's body ornamentally as well as securely. Two additional tapes above the shoulders would only be required.

Were a plan like this to be adopted, the business of dressing would be that almost of a moment; and besides saving inconvenience to the child, it would entirely prevent the necessity for using pins in dressing infants, which practice cannot be sufficiently reprobated, and which, even on the present plan of dressing, is never necessary. Pins are a very convenient substitute for a needle and thread; but they should not, on any account be used in any part of an infant's dress.

It is customary to wrap the infant, when dressed, in flannel, and to place it in bed. Great attention must be paid to keeping it warm; for the powers of life are very weak in such young creatures, and therefore cold acts very injuriously on them.

Few nurses remove the child's clothes until after a lapse of twenty-four hours; but after that time, they should be changed, and the child should be washed twice in every day. Warm water is the most proper for washing infants, and it should be used in sufficient quantity to wash every particle of dirt and of unpleasant secretion from the surface of the body; great care being taken to make all the folds of the skin perfectly clean. Much attention is also required to wipe the skin dry: indeed it is to negligence on this point that ulcers are so often formed or great irritation is produced within the folds of the skin and at the flexures of the joints. Where cleanliness is strictly enforced, and all those concealed parts of the skin are kept perfectly dry, such inflammations will never arise. As a substitute for this necessary care, nurses employ flour or hair-powder, and dust it over the skin, especially within these folds for the purpose of absorbing the moisture which is left after washing. It is true that the plan generally succeeds; but why should its adoption be necessary? Care and attention in the use of the towel will be more than sufficiently efficacious in every instance.

It is of consequence to press this point very particularly; for, as every mother knows, the duty of making an infant's skin dry is one of which the nurse is called on to perform many times in every day, and much depends on its being properly performed as often as it may be necessary and as speedily after it becomes so as possible: warm water being used to cleanse the skin frequently in the day.

The question of Nursing will be discussed in the next Number.

ART. 3. *On the great care which is required to avoid evil from large bleedings.*

IT is often necessary to take away very large quantities of blood for the cure of acute diseases. Under proper management this practice is unattended by great hazard to the constitution; but if care be not taken, the life of the patient may thus be suddenly lost.

This necessary care, however, consists in the performance of a very simple operation.—*Under all circumstances after very large losses of blood or in cases of fainting after bleeding, keep the horizontal position.*

A young female was bled largely and repeatedly for puerperal fever. She was directed to remain strictly in bed, and even to set upright as little as possible. Regardless of these directions, she felt so well, and indeed she was well compared with her state when the disease was upon her, that she got up and walked about two yards to a chair. She felt faint and tried to return to her bed; but whilst taking the second step, she fell down dead.

A person was bled largely for the cure of an acute disease. He became faint; some delay occurred in placing him in the horizontal position, and he immediately died.

A similar case to the above might be related, and indeed, many such have occurred.

A man cut his throat. He lost a very large quantity of blood, but as symptoms of inflammation occurred afterwards it was deemed necessary to bleed him at the arm. After the blood had flowed for some time, he became faint, evidently from the weakened state of his frame in consequence of the previous loss of blood. He was permitted to remain in the upright position and he suddenly died.

Such cases as these are sufficiently instructive, especially as very little danger will arise from taking away, under the proper circumstances, large quantities of blood from the arm; at least in the practice of a skilful medical man. The lesson that they teach should therefore be attended to: lay the person down *immediately,* if he faint after bleeding, and keep all patients strictly in the horizontal position who have been bled largely and repeatedly within a short space of time.

With this caution then these cases are not dangerous; and therefore what is said above should not lead our readers to impede their medical man in his treatment of acute diseases. Acute inflammations often require that immense quantities of blood be lost before life is safe and the disease is cured; and as such complaints empower the constitution, as it were, to bear the required evacuation, it is sufficient to be aware of the impending evil and to guard against it by laying the patient on the floor or other part, immediately on his becoming faint from the loss of blood. On no account, let it interfere with the practitioner and prevent him from using the remedy effectually.

ART. 4. *On the Use of Blisters, and of the various substitutes for them, namely, sinapisms, stimulating embrocations, moxa, setons, issues, caustics, &c.*

IT was stated in the article "on the care of blisters" given in our last number, that great diversity of opinion respecting the value of blisters exists amongst medical men. Some practitioners use them extensively, and others not at all.

There are arguments for and against the use of every remedy. No medicine is fitted for all cases, and with regard to this question respecting blisters, it appears to us, that whilst those who condemn them altogether have erred in rejecting them under all circumstances because they do harm in some cases, the majority of medical men and others have erred in using them too indiscriminately.

Not only are blisters frequently used, in cases where they really form a dangerous remedy, but they are often recommended where other plans of treatment would be equally efficacious; but still there are very many cases, in which blisters seem to be more useful than any other description of medicine.

In discussing the use of blisters however, it will be necessary to consider them in a more general point of view. They form but one of a numerous tribe of remedies which differ materially, in their mode of action, from any other class of medicines.

Internal remedies act in two ways. Some of them are absorbed from the stomach, and thus pass into the blood : others act by bringing into play the sympathies, which exist between the stomach and other parts of the body. The external remedies, now under consideration, are principally employed to take advantage of similar sympathies which display themselves as connecting the skin with the same parts of the body.

Next to the stomach, the skin performs the most important part in modifying the actions of the animal economy. If its functions be perfect, many of the internal actions will be perfect too ; and hence, the treatment of many serious diseases depends mainly on attending to the state of the skin : or, at least, in these diseases, other remedies would be almost useless, unless the functions of the skin were kept in proper order. Stimulate the skin when it is in a state of torpor, and the internal parts sympathize with the actions which are thus induced ; relax the vessels of the skin when they are in a constricted state, and the whole system responds to the change which has taken place. In this way fevers are resolved and inflammations of particular internal parts cured.

Of course, it is necessary, in fulfilling all these indications, to act on the skin in various ways. Sometimes the cuticular surface must be stimulated and sometimes soothed. But it is with the class of remedies which stimulate the skin that we are now engaged. Now, blisters form but one mode of exciting the skin; for there are many others. The mild ones are the application of heat as the warm-bath, &c., friction, either with or without various kinds of stimulating embrocations and ointments, and several others; the more violent ones comprise sinapisms, the application of burning bodies as of moxa, &c. issues, setons, caustics, and many more.

We have entered into this enumeration to say, that no two of these remedies act precisely in the same way, nor are they followed by the same effects on the system. One of them is better calculated to relieve one state of disorder; another, another. Even the same remedy varies in the effect which it produces according as it is applied moderately or otherwise. Hence they have each their specific uses, and evil results from applying them improperly.

Blisters have been used very extensively in the practice of medicine, because it is found that a greater degree of irritation is produced by their means at a smaller expense of pain than by most other similar remedies. If such be the reason why blisters are applied, as it can easily be conceived, that the constitution may be in a weak and irritable state, so that injury may result from inducing a great irritation in so susceptible an organ as the skin, it will be readily conceived that the use of blisters is often not devoid of danger.

But, if the cause of their being dangerous be clearly understood, if it be seen that very irritable and very debilitated states of the constitution are to be avoided, and if care be taken to weigh well the necessity for the application, so that they be not recommended in acute diseases where other remedies will be equally efficacious, we may allow them to be prescribed for us, and we shall find very great benefit from their use, even although the popular opinion be erroneous as it certainly often is, that " a blister is a safe thing."

The deduction from this discussion is, that blisters should never be applied in acute disorders such as fevers, violent inflammatory colds, &c., except under the eye of a medical man ; that as the constitutions of children are very irritable, they should be kept on for a very short time, or be but sparingly used, in their complaints, under any circumstances ; and on the other hand, that it is in the treatment of chronic complaints and in those states of sub-acute inflammation of particular parts, where there is much local pain, but where the whole system is not called on to sympathise so violently as in more decided and acute fevers or inflammations, that the use of blisters is so advantageous.

But enough has been said on this subject; more perhaps than would have been proper, if it were not desirable to caution the public against applying blisters indiscriminately especially in children's diseases.

One of the greatest imperfections in the action of blisters, is the uncertainty of their taking effect, and in all cases, the length of time which elapses before they begin to act. In many states of disease this latter is a great evil: and several substitutes which are not liable to the same objection have been suggested. Dr. Beddoes recommended in certain inflammations of the chest where a speedily-acting blister is desirable, to roll up a towel so that it shall fill a tumbler and project a little beyond its mouth, the surface of the projecting part being left flat; to pour boiling water on the flat surface until the whole towel is wet and will imbibe no more, and then immediately to transfer the flat end of the towel to the skin. A blister is of course raised instantaneously, for, the part is scalded; and it is probable that the application would often be an efficacious one.

A less terrifying and very ingenious mode of producing an instantaneous blister was suggested not long ago; namely, to brush the proposed part of the skin over with nitre acid. To do this properly a solution of salt of tartar must be prepared, and a large camel's-hair pencil for the purpose of applying it. The acid is then to be rapidly brushed over the part by means of a feather, and the solution of salt of tartar to be applied in profusion immediately afterwards. The acid exerts a strong action on the skin, and this action, which would be very hurtful. if it were allowed to go on, is checked by the salt of tartar neutralizing and destroying the acid, and thereby rendering it perfectly inert. This mode of raising a blister is very effectual, and it produces much irritation: indeed it would not have been so minutely described, had it not been thought right to give it as a piece of useful information to be acted on, at any moment, that our reader's medical man may think it advisable.

Sinapisms constitute another and a speedy way of raising any proposed degree of irritation on the skin. Flour of mustard with or without an equal proportion of crumbs of bread, mixed up with hot vinegar or even hot water alone, to the consistence of an almost fluid paste and spread thinly on a square piece of linen forms a sinapism It is useful to turn over the four edges of the linen upon the sinapism; for in this way, the size of the sinapism is accurately determined, and the mustard is prevented from spreading and running on the other parts of the skin than the proper ones.

Sinapisms will generally begin to give pain in less than half an hour after application, and they are to be permitted to remain on the part for a longer or shorter period after this, according as a greater or a less degree of irritation is desirable. They very soon make the skin red, and if continued long enough will raise a blister.

Sinapisms are not used for the purpose of blistering the skin so often as they ought to be. In general their use is restricted to the very last stages of apparently fatal diseases, where they are applied to the insteps and legs in the hope of rousing the declining circulation and renovating its powers. But they may be used for all the common purposes of a blister and with great advantage. Indeed they form the best kind of blister for children, on account of the ease with which the degree of irritation produced, may be regulated. To be sure blisters are often prescribed with an order that they shall be only allowed to rise to a certain point, but the injunction is generally laid in vain, on account of the uncertainty of the time at which the rising begins to take place.

The ancient physicians used blisters and similar remedies to a much greater degree than we do; they often applied twenty or thirty very small ones on different parts of the body at the same time. The French, in like manner, depend much, in their practice, on the application of irritating substances to the skin. But their favorite remedy is the *moxa*, which is in fact a species of actual cautery, as the English surgeons call the application of red-hot iron and other similar bodies to the skin. The moxa is a small cone of cotton so prepared, that if lighted at the apex, it will slowly burn away like a pastile. The French practitioners frequently burn several of these cones on the skin in succession: an eschar is formed, when the base of the cone becomes ignited; and, it is said, that the pain of this application is not severe. After a while the eschar separates, and an ulcer is left which is permitted to heal as slowly as it will do when left to nature.

The use of moxa is scarcely known in England; but it is probable that it is a very efficaceous remedy especially in chronic complaints.

It is not necessary to enlarge further here on the remaining remedies of this class, caustics, setons and issues. Caustics are only moxas formed in a different way and with respect to setons and issues it will be necessary to devote a separate article to the description of the best mode of attending to them and of thus gaining the greatest advantage from them with the least inconvenience.

Miscellaneous Department.

ART. 5. REVIEW of

AN ESSAY of HEALTH and LONG LIFE. By GEORGE CHEYNE, M. D. F. R. S. 2d Ed. 1725.

(CONTINUED.)

Of Sleeping and Watching.

"THERE is nothing more certain," says our excellent author, "than that, abstracting from acute cases, our sleep is sound, sweet and refreshing, according as the alimentary organs are easy, quiet and clean"; whilst disturbed sleep with a foul mouth in the morning, "and white tongue, yawnings, coughing, spitting, or reaching and heaving, without appetite, spirits or life," this is the effect of a deranged digestion and is very often produced by eating full, heavy and late suppers.

Dr. C. then very carefully proves that it is proper to sleep at night and watch during the day—a useless labour, most of us would say; and yet perhaps there is nothing which more needs correction in the habits of the higher and middle classes of society than the late hours which the present custom of society imposes on us. If the London public would but once taste the sweets of the morning air at this pleasant season (June), they would feel more anxious to rise from their beds to see the sun on its first appearance, than to witness, as they often do now that glorious spectacle when they retire to bed, jaded by the effects of night visiting and incapacitated for estimating the beauties of so beautiful a scene. Hear Dr. C.

“ I advise all such (i. e. invalids), if they would preserve their health and lengthen out their days, to avoid as much as is possible, the evening dews, nocturnal studies and unreasonable watching; in summer, to go to bed with the sun, and in winter to rise at least by break of day. Those who live temperately, will necessarily sleep but little,” but the sleep will be sound and the spirits free on rising in the morning. Lying awake in bed in the morning is decidedly reprehended, and eight hours sleep is the longest time allowed even for a valetudinarian.

The whole of Dr. C.'s essay on sleeping and watching is very entertaining as well as convincing; we are desirous of quoting several of his eloquent passages; but we must be contented with the following:—

“ All nations and ages have agreed that the morning season is the proper time for speculative studies, and those employments that most require the faculties of the mind. For then the stock of spirits is undiminished, and in the greatest plenty, the head is clear and serene, the passions are quieted and forgot, the anxiety and inquietude that the digestions beget in the nervous system in most tender constitutions and the hurry the spirits are under after the great meal are settled and wrought off.”.

We hope that we may be permitted to add that it is now six o'clock in the morning, the sun shines bright into our room, and we write the above passage with that convincing feeling of its truth as well as beauty which nothing but experience can bring with it.

4. *Of exercise and quiet.*—The due regulation of exercise and quiet,” we must quote again, the author obliges us, “ is

almost as necessary to health and long life as food itself." "For let whatever diet be pursued, however adjusted both in quantity and quality, let whatever evacuation be used to lessen the malady or any succedaneum be proposed to prevent the ill effects, our bodies are so made and the animal economy is so continued, that without due labour and exersise, the juices will thicken, the joints will stiffen, the nerves will relax and on these disorders, chronical distempers and a crazy old age must ensue."

A curious speculation follows. Dr. C. supposes that animal food was not originally necessary to the human constitution; and that whilst men lived entirely on vegetable food before the flood and thereby had their existence protracted until the age of 1000 years, the Almighty introduced the use of meat and wine as á means of shortening men's lives from this period to seventy; lest, from the great increase of wickedness, the world might, "from the long life of its inhabitants become a hell and a habitation for the incarnate devils:" For, "he wisely foresaw, that animal food and artificial liquors would naturally contribute towards this end; and indulged or permitted the generation that was to plant the world after the flood, the use of these for food, knowing that though it would shorten the lives and plait a scourge of thorns for the backs of the lazy and voluptuous, it would be cautiously avoided by those who knew it was their duty and happiness to keep their passions low and their appetites in subjection." We do not think that Dr. C. conceived this speculation at day-break; unless it were under the influence of the night-mare after having broken his own rule and sat up late and eaten a hearty supper the night before.

Walking is the most natural kind of exercise; but it is too fatiguing for those who are weakly.

" Riding is certainly the most manly, the most healthy and the least laborious and expensive of spirits of any; shaking the whole frame, promoting an universal perspiration and secretion of all the fluids; to which may be added, the various changes of the air through which they so quickly pass, every alteration of which becomes as it were a new bath, and thereby, variously twitching the nervous fibres to brace and contract them, as the new scenes amuse the mind."

A carriage is only adapted for the old and the lame. Home-exercise is not recommended except in very bad weather; " for, being in the air, contributes much towards the benefit of exercise". The desire for exercise in children, and, its advantages, especially in the open air is alluded to; the desire being so great, that,

" Sitting or being confined seems to be the greatest punishment they can suffer, and imprisoning them for some time will much more readily correct them than whipping."

The kinds of exercise which are best adapted for persons labouring under certain disorders are then pointed out, the distinctions arising from a well-known fact that by peculiarities of labour certain parts of the body may be strengthened even at the expence of the rest. So, for weak lungs, talking much and loud, and walking up hill are recommended; horse exercise for faults in the digestive organs, &c.

Exercise ought to be taken, says our author, on an empty stomach; we should say not earlier than two hours after a meal; it should not be continued till great fatigue is induced; the body too should be kept warm after exercise, and as a fourth condition, he says temperance should be joined with exercise, meaning, that great exercise is no excuse for eating more than is proper though the appetite may be increased by exercise.

Cold bathing also is much recommended; but not to those who labour "under the actual fits of a chronical distemper, with a quick pulse, head-ache, weak lungs, or a foul stomach." Dr. C. does not advise plunging in head first, but to pour some basins of water first over the head, if the patient is delicate, and then,

"Holding by the rope, to walk down the steps as fast as one can, and when got to the bottom, bending the hams, as women do when they curtsey low, to shorten the length of the body so as to bring the head a good way under water and then popping up again to take breath; and thus alternating for two or three times, and out again, rubbing and currying well before dressing."

The use of the flesh brush is thus naturally introduced and it is recommended by an excellent but homely argument, namely, the great advantage which horses and other animals derive from the use of the curry-comb.

5. *Of our evacuations and their obstructions.*—The intestinal evacuations are always figured as it is technically called in a state of health. Too great costiveness, when present, arises from excess in strong liquors, or from a slow and imperfect digestion, or from a too sparing diet: Purgings, on the contrary, from the person having eaten too much, or of food which is of too strong a nature. Hence eating and drinking largely is not the way to get fat; and especially this is said to be true of children. As a corollary to this we may add, that roast beef when given plentifully is a very efficaceous means of starving a young child to death.

A mild and spare but nutritious diet is the most proper for making emaciated people fat. Skilful grooms know this very well, and man-doctors, our author says, should not disdain to take a lesson out of their humbler brother the horse-doctor's book. Eat, says he, "of soft, light, tender, cool and mucilaginous food," and "little at a time and often, never without an appetite nor to satiety; joining to these, the other helps and assistances mentioned in this treatise." A stronger diet will be allowable when the debilitated powers have been recovered by the above method.

An excellent lesson is conveyed in the following sentences connected with the same subject.

"There is nothing more ridiculous than to see tender, hysterical and vapourish people, perpetually complaining and yet perpetually cramming; crying out, they are ready to sink into the ground and faint away, and yet gobbling down the richest and strongest food and highest cordials, to oppress and overlay them quite."

It is indeed a mistake to attempt to cure such symptoms by cordials

"The proper remedy in this case, is to cleanse the fetid abyss and then to preserve it clean by cutting off all the inlets of putrefaction. For there is nothing more certain than that of those born sound here in England, the head-aches, stomach-aches, colics, and nervous pains and disorders, universally proceed from idleness and fulness of blood."

One moderate flesh-meal a day will generally be followed by one evacuation of the bowels, and more than this would be hurtful. One in two days indeed, is sufficient for those who are obliged to underdose themselves with food for the cure of nervous and other chronic disorders; for, "he who, without firm bowels, thinks to cure a nervous distemper, labours in vain." And yet, how common it is for valetudinarians to purge themselves! Let Dr. Cheyne teach them better.

Dr. C. supposes that the remains of the food do not naturally pass from the bowels until after a lapse of three days.

" Of " the evacuations by water," it may be said, that a turbid, red fluid is a sign of excess in food, as also is one that is pale, limpid, sweet and in large quantities; whilst the healthy secretion is " of a bright amber-colour, having a light cloud hanging almost from the top to the bottom and being about three quarters of the liquor taken down."

The evacuation by perspiration is then alluded to, and its importance is pointed out. An interference with the proper secretion of the fluid of perspiration seems to form one of the readiest modes for the causes of diseases to produce their effect on the human constitution. Catching cold is probably some internal effect produced by the deleterious action of cold air on the external skin. The skin however is apparently made more susceptible of receiving impressions from these causes of disease by the secretion of perspiration being suspended or otherwise deranged, by too great indulgence in rich food, or generally speaking by those numerous states of ill-health which constitute the valetudinarian condition. Moderate living, with exercise, will ensure a proper perspiration; and thus, the body will be fortified in the best way against the attacks of disease from catching cold.

It is said in conclusion, that " persons of weak nerves have often a critical flux of rheum from the glands of the mouth and throat, (causing spitting) to a very large quantity, which, if not tampered with, brings them great relief."

6. *Of the passions.*—This section is less susceptible of being usefully analysed than any of the others. Dr. Cheyne says however, that " the passions have a greater

influence on health than most people are aware of; that violent passions produce acute diseases and slow ones chronic complaints; that whilst the thoughtful and "and those of good understanding suffer most by the slow and secretly consuming passions, the indolent and the thoughtless suffer least from the passions"; and lastly that, although "the diseases, brought on by the passions, may be cured by medicine, when once the passions themselves cease or are quieted, that the preventing or calming the passions is the business, not of physick, but of virtue and religion." The true physick for the mind is the introduction of good mental habits of action.

7. *Of miscellaneous matters.*—Dr. C. says that each person has a measure of health, beyond which his original frame will not permit him to go; but that "if the rules and cautions, laid down in this treatise, be carefully, steadily and constantly observed," life may be made "tolerably easy and free from grievous sufferings" even in the worst cases, whilst, if the generality of chronical cases be taken in due time, before the viscera are quite spoiled, they would infallibly bring about a perfect cure." We firmly believe it.

Dr. C. goes on to say, that the causes which produce chronic diseases in Great Britain are so deep rooted, that he never saw one person who, although cured, had resolution enough to presevere in such a course of life as would prevent them from

"Springing up again in some symptom or other and at last bringing on that *grand one*, which puts a final period to all their sufferings." "One good reason for this is, that it requires a regimen and conduct so entirely contrary and opposite to the habits and customs, and the universal bent and appetites of this island, that it becomes a kind of perpetual self-denial to them, which the British nation, in general, does not mightily admire. Another reason is, that fine folks use their physicians as they do their laundresses, send their linen to them to be cleaned, in order only to be dirtied again."

In describing the different temperaments of the body, Dr. C. says, " Those who have naturally soft, thin, small, and short hair, are of a loose, flabby, and relaxed state of nerves." " Those of the fairest hair are of the loosest fibres, other things being equal." " Those of large, or as they are called mastiff muscles, and of big bones, are generally of a firmer state of nerves than those of little muscles and bones." " Soft, yielding, pappy flesh is a sure sign of loose fibres ;" as is, " a white, fair, blanched or ashen-coloured complexion," and also the signs of a " fat, corpulent, and phlegmatic constitution.' Those too, who are subject to profuse evacuations of any kind and those who have cold extremities and readily catch cold are of this loose habit of body. Females of this temperament frequently miscarry.

Such persons have their times and seasons for being ill and well. They droop about Christmas, or when the cold weather sets in ; they get worse till the spring becomes warm ; they acquire their best health about Midsummer, and often continuing well during the warm weather fall off again as winter approaches. An attentive consideration of this fact will be sufficient to point out a great part of the necessary rules for such persons. Dr. C. recommends that they shall be careful to live on the food which the season itself provides, or on such articles as are naturally and without forcing, in season at the different periods of the year. This rule requires to be taken with caution. He highly extols exercise in such cases. " Neither Sydenham nor Fuller," says he, " have been able to tell the half of what obstinate exercise will do in low, cachectic, consumptive cases," and we believe him. The more exercise is taken the less clothes are required, and Dr. C. recommends as light clothing as possible. Frequently to shave the head and face, and to wash, scrape, and pare the feet and toes are also recommended; the plentiful use of cold water is highly spoken of. Moreover it is observed that such persons should write and read as much as possible in an erect position, and that the fat and unwieldy should abstain from the use of fluids.

The aged are directed to avoid the inclemency of the seasons and to understand that exercise is not so important to them as to younger persons; but especially "to lessen their diet gradually, as they grow older before nature has forced this diminution on them. This, says our author, is a powerful means of making their old age green and indolent, and to preserve the remains of their senses to the very last." Cornaro, gradually lessened his diet so far that he at last came to live on the yolk of an egg for three days.

The folly of invalids supposing that their chronical complaints can be cured on a sudden or in a short time is then pointed out. A spendthrift who has mortgaged his estate deeply cannot, it is said, pay off his incumbrances at once, let his retrenchings be what they may, and a melancholy picture is then given of the evil consequences which result from invalids thinking otherwise: they go, he says, from doctor to doctor, vainly seeking for what they can never find, until they inevitably fall into the hands of quacks.

In conclusion, Dr. C. says, "the grand secret of health and long life, lies in keeping the blood, and consequently other juices of the body, in a degree of fluidity."

We have thus thought it right to extract very largely from this excellent old work of Dr. Cheyne's, and our readers will be obliged to us for having done so. We shall give his "conclusion" entire.

"To conclude, without taking the benefit of revelation, which in a sense relating even to our mortal bodies, has brought life and immortality to light; if, but the precepts of the pagan philosophers were observed,

Servare modum, finemque tueri, naturamque sequi;

If men would but observe the golden mean in all their appetites, passions, and desires; if in all their thoughts, words, and actions, they would but mind, I will not say the end of their being and existence here, but the end to which their thoughts, words, and actions, naturally tended in their last resort; and lastly, if in the gratification of their appetites, passions, and desires, they followed the uncorrupted dictates of nature, and neither spurred her on beyond her braving, nor too violently restrained her in her innocent bias, they would enjoy a greater measure of health than they do; have their pleasures more exquisite and their sensations more delicate; live with less pain, and die with less horror. For had it not been for the lewdness, luxury, and intemperate gratifications of the passions, and appetites, which first ruined and spoiled the constitution of the fathers, whereby they could communicate only a diseased, crasy, and untunable carcass to their sons, so that, with the world's decay, vicious souls and putrified bodies, have, in this our age, arrived to their highest and most exalted degrees; I say, had it not been for these evils there never had happened so much sickness, pain, and misery, so unhappy lives, and such wretched ends as we now behold among men. But even in this our lapsed estate and condition, had the dictates of nature and reason, not to say religion, been followed; we might have passed our days in indolence (at least from chronical distempers) if not innocent pleasures, arrived at a good old age, with our senses free, and our rational faculties clear, and at last departed in peace, as a lamp goes out for want of oil. And let the gentlemen of wit and fire, of banter and sneer, hug themselves ever so much in their boasted tranquillity and and security, gratify their passions, appetites, and humours to the full, and despise futurity and whining; I dare promise, when the farce is ended, and the last minutes are drawing on, they would prefer a life thus led, and an end so calm, to all the pleasures of lewdness and sensuality, and the bounces of a false and ignorant security."

Art. 6. *On the Climate of London.*

In the first of Mr. Howard's two volumes on "the Climate of London," a series of monthly tables of the weather is given from 1807 to 1819 both inclusive: the second volume contains the author's

"Review, arrangement, and generalization of the vast body of facts, contained in the first part of the work, in other words, an exposition of the true character of the climate of London as deduced from observation; and secondly, a detail of principles, speculations, and opinions, respecting meteorology in general."

The heat of the atmosphere near the surface of the earth is not caused entirely by the direct rays of the sun; indeed it would seem,

"That the proportion of heat which it (the mass of air) derives from the direct passage of the rays is the same in all seasons. Hence, Mr. Howard goes on to say, "the accumulation of heat near the surface of the earth, which we always experience from continued sunshine, is evidently due to the stopping of the rays of that surface, to their multiplied reflexions and refractions, in consequence of which they are, as it were, absorbed and fixed, for a time, in the soil and in the incumbent atmosphere. By this process, the earth, when in a cold state at the end of winter, becomes gradually heated to a certain depth, as the warm season advances. On the other hand, when the sun declines, in autumn, the soil, thus heated, acts as a warm body on the atmosphere and gives out again the heat it has received."

From this, it follows, that the temperature of the air is not at its maximum and minimum at the solstices, and at the mean at the equinoxes, but at about a month after those periods. Hence Mr. H. purposes to make a new division of the seasons, making spring begin on March 6th and end on June 6th; summer to be included between June 7th and September 7th; autumn between September 8th and December 6th; and winter between December 7th and March 5th.

Taken in this new arrangement the temperature in London, on the average, rises during the spring, from 39.94° to 58.08°, or 18.14°: during the summer, from 58.08° to 64.75° or 6.67°, and declines again 6.59°: during autumn, declines 18.35° from 58.16°: and during winter, after declining 5.36° or to 34.45° it rises again 5.49° or to 39.94°.

A curious circumstance relating to the average temperature of London is, that, from the mass of buildings and of animals, and from the constant and large fires which it contains, the temperature is "two degrees, on the annual mean, above that of the immediate vicinity."

Curious as this circumstance is, a little reflexion on the laws which regulate the promulgation of heat will afford a ready explanation of the fact. Why does snow exist on the tops of mountains in the Torrid Zone? because the rays of the sun give very little heat to the air in its passage through it. If a thermometer be taken from the shade and held in the sun's rays, it does not rise because the rays impart their heat to the air and the air to the fluid in the bulb of the thermometer, but because the thermometer intercepts a part of the rays of the sun and becomes heated by the gradual accumulation which thus takes place. The temperature is higher near the surface of the earth than on the top of a hill, because it is the earth itself and the things upon it which collect the heat and implant it by contact to the air ; and therefore, as the quantity of surface at the top of a mountain bears but a small proportion to the air, to what it does at the bottom, the air must be colder at the top than the bottom, and the higher the mountain, the colder its top will be.

It is easy to deduce from this, that the great number of vertical surfaces, which the buildings of a large city present, must, by their mutual reflexion of the sun's rays, collect a much larger quantity of heat than the plain surface of the country can do, from which not only the sun's beams are again freely radiated to the sky, but the heat, which is accumulated, is in some degree dissipated by the light winds of summer which sweep along it without obstruction.

It appears that this

> " Excess of the city temperature is least in spring and greatest in winter; and seems to belong entirely to the *nights*, which average 3.7° warmer than the country, while the heat of the *days*, owing without doubt, to the interception of a portion of the solar rays by a constant veil of smoke, falls, on a mean of years, about a third of a degree short of that on the open plain."

The mean temperature of London is 48½° or about 2° less than has been usually supposed. It varies however as much as 4° in different years " and the variations, according to Mr. Howard, are periodical, and appear to recur in cycles of seventeen years." The year 1816, he says, was the coldest of a cycle and it had its parallels in 1799 and 1782; the year 1806 was warmest of a cycle, and it is probable that it will have its parallel in 1823, whilst the next coldest of a cycle will be 1833.

The full range of the thermometer in London, is not less thon 100°; namely, from 96° the greatest heat to — 5° the greatest cold. The mean temperature of no month however is below the freezing point, and the mean annual range is 72°, the mean difference between day and night being 14°. The mean temperature of the different months in whole numbers is, " January 34°, February 39°, March 41°, April 46°, May 55°, June 58°, July 62°, August 61°, September 56°, October 50°, November 40°, December 37°."

The mean annual range of the barometer is 1,998 inches; extreme range in ten years, 2.49 inches, namely, from 30.71 on February 24, 1808, to 28.22 on January 29, 1814: the former occurred during a moderate N. E. wind, and the latter during strong southerly gales.

On the average, a wind between north and east prevails in each year for	74 days
East and south	54
South and west	104
West and north	100
Variable winds occupy the remaining	33
	365

So, there are 140 easterly and 245 westerly winds, and 192 northerly, and 173 southerly winds.

" The prevailing winds in the different seasons, according to the division of Mr. Howard, are the following; in the beginning and end of winter south and west, in the middle north; in spring north-east during the first two-thirds and southerly during the remainder; in summer, the predominating winds are those which range from the west to north, the latter point not being included; in autumn, the winds from south west prevail throughout the season."

ART. 7. *On the Insects which are hurtful to Mankind.*

(CONTINUED FROM PAGE 240. VOL. 1.)

MANY insects seem to attack the human body solely for the purpose of feeding on the blood. Some of these produce exquisite pain when they strike their "tremendous apparatus of knives and lancets" into our skin. The horse fly will take away as much as eight drops of blood, when it attacks the human subject; the sand fly of America, called the burning fly from the intense burning pain which its bite occasions, will make the blood run down the face in streams, although it is so small as to be hardly perceptible. The bite of the stomoxys calcitrans, a fly not unlike the common house fly, produces almost as much pain as the sand fly; and an anecdote is related of a gentleman being dreadfully teased by an insect for several nights, so that he could not sleep; when it was found that a swallow fly had strayed from its natural habitation, the nest and skin of the swallow, and made a lodgment between the sheets of his bed. None of these torments however are more terrible than the many species of gnats or musquitoes. The rostra or beaks of these insatiable blood-suckers consist of five lancets besides the sheath; some of the lancets being barbed for the purpose of fastening the instrument in the skin, so that it may act as a syphon and draw away the luckless sufferer's blood. In hot climates, these insects form so great a pest that the hum of a musquito becomes more terrible than the roar of a lion. Dr. Clarke relates that in the Crimea, the Russian soldiers are obliged to sleep in sacks, and still some of these occasionally die in consequence of mortification produced by the bites of musquitoes. In America, soldiers have been obliged to dig holes in the earth with their bayonets, and sleep with their heads inserted in those holes, and their hammocks tied round their necks.

Some insects sting only out of revenge. In these the piercing instrument, which is essentially of the same kind, is fixed in the animal's tail and generally their stings are venomous. The Linnæan order Hymenoptera comprises the majority of these insects. Ichneumon flies will occasionally attack the human subject, and the powers of the bee, the wasp and the hornet are well understood. Ants also sting in the same way, and some of them give exquisite pain. A black ant at Ceylon, called Coddia produces as much pain as " a coal of fire;" but it is said to be of a noble nature and never to sting unless irritated. The Cingalese give an amusing reason for this; " formerly," they say, " these ants went to ask a wife of the Noya, a venomous and noble kind of snake; and because they had such a high spirit as to dare to offer to be related to so generous a creature, they had this virtue bestowed on them that they should sting after this manner. And if they had obtained a wife of the Noya, they would have stung as bad as he." It seems that in other countries besides Ceylon, ants are supposed to be allied to serpents, or even to be the parent of them. Scorpions come next under consideration. Some of them are a foot long. Their sting consists of " a simple incurved mucro, terminating in an ampullaceous joint." These animals are exceedingly cruel and ferocious. Other insects produce injury simply by biting. The scolopendra or centipedes are of this class. Dr. Lister mentions one scolopendra which is eighteen inches long. The bite of some of these large ones is said to be mortal. Spiders also use their very strong jaws for the same purpose. The tarantula, which is a spider, is famed throughout the civilized world. The bite of the tarantula however is not dangerous; but that of another Mediterranean spider is said to be mortal to man as well as to animals. This insect is as large as a hornet, and its web is so fine as to be almost invisible.

A third class of insects produces great annoyance in other ways. A very minute creature, the Thrips Physapus excites an intolerable sensation in sultry weather by merely creeping upon the skin. Several foreign insects produce still greater evils. The common house fly acquires this power of annoyance when it walks upon the skin at the close of the summer; but Mr. Arthur Young relates, that an annoying fly is so numerous in certain parts of France, that he could "manure four or five acres every year with dead flies." The eye fly of the East Indies is a very minute insect, which torments persons by flying into their eyes. It is well known that the hairs of the cowhage produce very great irritation on the skin: in the same way, the stiff hairs of certain caterpillars are very tormenting. Ladies standing near the nests of these insects have had numerous tumours produced on their necks, occasioned by short hairs, brought by the wind. Probably these hairs are barbed and thus make their way into the skin; as is the case with certain seed vessels, those of the travelling oat for instance, which thus creep along the ground, or with the fur used by hatters, which is consolidated, so as to form felt, by favouring the operation of this barbed nature of the fur.

The juices of spiders are often very irritating to the skin; whilst in South America, if a fiery red acarus called Coya or Coyba be crushed on the skin, its fluids produce large tumours, which are often followed by death. Hence on the banks of the Neyba it is necessary to avoid touching any part that is stung, lest it should be by one of these insects, which are crushed by a mere touch. The Indians get their companions to blow them off their skin. The animal is much smaller than a bug. Perhaps the Indians use this insect as the means of making their arrows poisonous.

It is still necessary to mention that some insects actually live in the human stomach. The meal worm, a species of beetle, has been voided both by male and female patients; and Dr. Lister relates several analogous histories. The larvæ of similar insects have sometimes been coughed up: caterpillars have also been vomited from the stomach as Dr. Lister attests. The eggs of these insects had probably been swallowed with the food. Maggots have often been discharged from the nostrils in certain patients, and a case occurred at Asbornby in Lincolnshire, where, a pauper was found in the middle of June, literally devoured by maggots before his death. He had concealed meat about his person, which became putrid and full of maggots; and these maggots by proceeding to attack the living substance caused the man's death. Insects have also been voided through the urinary passages. Messrs. Kirby and Spence minutely describe one of these insects (vol. 1. page 140.)

A punishment and a terrible one among the ancient Persians was, to shut the malefactor between two boats of equal size, except that the head and feet were left bare. These parts were moistened with honey, and on being exposed to the sun, the honey attracted the insects. The unhappy victim was obliged to take food; so that he lived often for many days. One is mentioned who lived seventeen days; and, on taking off the upper boat, his flesh was found to be full of worms.

Art. 8. To *render water* particularly *wholesome* and *palatable*, those who drink it in perfection, should, after having boiled and passed it through a filtering stone, cause it to be put into a common barrel-churn, to be there agitated for as long a time as may be thought necessary and then bottled with the addition of two dried raisins to each bottle. By this means a sufficient quantity of fixed air is given to the water and it then becomes delicious. So at least says our informant.

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Art. 1. *October.*

It is easy to perceive the great approach which we have made towards winter when we compare October with the month which preceded it. In the early part of the month, it is sufficiently warm in the middle of the day, and, in some years, the atmosphere is as tranquil as it usually is in the month of September: but the rains now begin to fall, the equinoctial winds strip the trees of their foliage and join the rainy season in giving the last blow to the heats of summer, the evenings and mornings become more chill, and therefore it must be expected that diseases will become more numerous and severe.

A change too, takes place in the kind of disease with which we meet. The bowel complaints of September are now very rarely to be seen; but in return, the inflammatory diseases, and particularly those which affect the chest, increase greatly in number and variety of appearance. Fevers also begin now to show themselves, although it is perhaps not until November, that the bad forms of fever appear in any great number.

Rheumatism indeed is occasionally met with, but the class of diseases which more particularly prevails in October is inflammation of the respiratory organs in some of its numerous varieties.

But here again we may see how great a difference variation of circumstances makes in the same disease. The chest diseases of spring are totally different from those which occur in autumn; nay indeed, they would seem to be diseases really of a different part. In spring pleurisy, and under that name must be comprehended all those pains in the side and stitches which occur at that season, abounds, whilst the coughs are all dry and hard, and the attendant fever violent in a great degree. In the chest complaints of autumn on the contrary, pleurisy does not often appear; pains in the side are very seldom complained of, the coughs are hoarse and barking, they are usually attended at an earlier period of the disease by a copious, and in the latter periods, a sticky expectoration, and the attendant fever does not bear the use of the lancet so well as in the former part of the year; in short the inflammation is not, as in the spring, seated in the pleura or that membrane which covers the lungs and lines the cavity of the chest, but it resides in the substance of the lungs themselves, or more commonly in the membrane which lines the larynx or organ of voice, or its continuation the wind-pipe, the air-tubes and terminating air-cells of the lungs. Thus, it is seen, that the inflammatory diseases of autumn are of the bronchial description, and we therefore meet with hoarsenesses, influenzas and other sneezing colds, losses of voice, spasmodic coughs, and diseases which put on the appearance of croup; whilst in spring, although cases of similar disease sometimes occur just as the spring-form of chest complaints is occasionally met with in autumn, the majority of cases, as we have before said, put on a very different appearance.

Of course more care is required to avoid these dangerous complaints than is necessary in the month of September, and the caution is more particularly applicable to the case of very old or very young subjects. The Asthmas of old people are closely allied to the forms of chest complaint of which we have spoken; and with regard to children, it is now that we meet with those hoarse influenza-like colds, which run through whole families without even permitting the elder branches to escape. The adoption of much warmer clothing, and thus preventing the skin from being too much and too suddenly chilled, and the use of fires as soon as the mornings and evenings become uncomfortably cold, form perhaps the best preservative against the attack of diseases such as have been described above.

But this is perhaps the time when our forefathers bled and took physic. The practice although it is now much neglected was assuredly beneficial to very many persons; yet, as far as our experience has gone, it is more useful in spring when the body is braced up to its highest pitch of tone than at the fall of the year when it may be considered to be somewhat enervated by the relaxing effects of the preceding hot weather and the increase of innutritious food by which it was accompanied.

On the whole therefore, violent evacuations are not to be recommended in autumn.

OBSERVATIONS ON CHILDREN.

ESSAY THE EIGHTH.

Art. 2. *On Nursing Infants and on Nurses.*

The question of *nursing* now presents itself. It may be supposed that nothing remains to be said on this subject; but it is otherwise; for if one of the principles on which these essays are written be correct, many of the bad moral habits of children are produced by the present mode of nursing, and consequently, if that mode be changed or modified, it is reasonable to hope that the formation of such habits will also be prevented.

The point of accustoming children to be so much on the arm has been casually alluded to in a preceding page; but it requires a more extended discussion in this place. The custom is so general in this country as to be almost universal, except in the lower orders of society. Whence has it arisen and what are the advantages to be gained by it? It is useful and in the world's opinion essential on three accounts: It facilitates the preservation of a due degree of warmth in the child, it affords an excellent opportunity for the nurse to give her charge exercise, and it secures a proper degree of attention to the infant in other respects. But the first of these objects may be gained by additional clothing and by the warmth of a fire, the child being ordinarily placed when awake in a basket, which may stand on a chair or on the table at the nurse's elbow, the second will be better done by the child's own exertions, than by the nurse's interference, especially when old enough to be on the carpet, and the third is one which a nurse should not dare to name.

What are the disadvantages of the practice? The child is always placed in an uncomfortable position and often in a hurtful one—he is constantly irritated by the arbitrary and sudden, and probably unwished for changes of position which the necessities or the caprices of the nurse occasion—if the nurse's temper be bad, he is thus too made to feel the effects of her ill-humour—and the due voluntary exercise of his limbs is improperly interfered with. It will be necessary however to discuss the subject more in detail.

The only proper position for a mere infant is the horizontal one. His body is made of the most yielding materials. What are afterwards to become bones are still composed, in a great part, of gristle; and the back especially, which bears the principal stress of the body when erect, is perhaps less ossified, comparatively speaking, than the other bones are. Hence then, the bones of an infant are not calculated for bearing the erect position: and as if to show beyond all doubt that that position is improper, nature has made his muscles so feeble and indeed so inactive, that he has no power of sustaining the weight of even an arm or a leg; much less then can he support his body and head when held upright. Moreover, if the experiment be tried, what happens? the back is bent and the head falls.

After thus proving that nature objects to an infant to be placed in the erect position, it is not an unfair assumption that this position is improper and hurtful: but this point will be mentioned again. The horizontal position then is decidedly the only proper one for an infant. But it may be said, that infants lie on the nurse's knee as well as on a bed. They do lie there because they are taught and obliged to do so; but not so comfortably. The uneveness and hardness of the surface sufficiently distinguishes it from that of a bed or mattrass; but after all the great objections to the practice are, that it subjects the child to all the caprices of the nurse, and interferes with his proper growth.

It may perhaps be accounted ridiculous to allude to the reasoning powers of an infant: but as its mind is in a state of formation or improvement from the time of birth, it must be occupied in some way or other while awake. It is at least using its eyes: it is observing the surrounding objects and making itself acquainted with them. But it cannot do this with any effect if it be constantly interrupted by the attentions of the nurse. How often must it happen, that when the child has formed an acquaintance with some object, the whole train of its new associations is destroyed by a violent and unlooked for change of position on the part of the nurse, though it may be accompanied by "God bless its little heart, it should go and look out of the window," or by some other expressions of endearment equally unintelligible to the child, and equally detrimental in its effect.

Let it not be said that this is a ridiculous mode of putting the question. It is a true picture of what happens in the best regulated nurseries every day, and it loudly calls out both for reprehension and alteration. But the evil of thus rendering a child dependant on a nurse does not rest here. Nurses are not always the most philosophical persons in the world: they may be ill tempered; and if so their illtemper may, by chance, be visited on the infant. At all events the capriciousness of the treatment, to which this custom gives rise, must have some effect in forming the child's temper, and doubtless the passions of infants are much fomented by the inconveniences which arise from such a mode of nursing.

This then is one great reason why infants should be allowed to lie on a bed or mattrass and not on the nurse's arm or knee. Good temper, as has been said before, is formed by the child's feelings being constantly kept in an agreeable state; bad temper by the opposite circumstances being allowed to exist.

A few words may be said here on a collateral branch of the subject. Good nurses are in the habit of talking to infants; and no one can attend to an infant of even a few days old without being assured that this attention is very agreeable to it. The practice is therefore a useful one; especially as much instruction is doubtless given in that way, or at least the connexion between the mother or nurse and the child thus becomes closer and more endearing: but it is not necessary that an infant should lie on the knee to be thus attended to. If the basket or tray in which it lies be placed on a table, the nurse can speak to her infant just as conveniently as if it lay on her knee.

Again, the exercise which an infant takes when lying horizontally, and with an opportunity of freely extending his limbs, is much more beneficial than when he is confined in the uncomfortable hollows of a nurse's knee. It will be seen below how true this is, and how much stronger children who have been differently brought up are than under the present system.

It only remains to consider whether the existing practice be necessary. It cannot be necessary for an infant to lie always on the knee, even though they do cry when laid on a bed; because they may be taught to do otherwise, just as easily as they were tutored into their present habits. The bed and the nurse's knee have equal attractions to a new-born infant; and, children only prefer the latter because they are taught to do so, and are thus led to acquire one of the worst and most inconvenient habits which belong to them: for nothing is so difficult as to put a child, when he gets older, out of the arms of his attendant.

The children of the poor however learn that from necessity which those of the rich are seldom taught at all. An ignorant nurse said to an infant, the other day, "you little thing, you never will be down for a moment; if you were a poor man's child, you would do so fast enough;" and yet she could not draw the conclusion that it was she herself who had created the difficulty; as the child did not of course differ in its nature from the infant of the poor person.

The children of the poor then, are taught better habits in this respect than those of the rich. It is moreover the custom in some other nations to act on the principles which have been advocated above, and a reference to their experience will show, that the practice is attended by the best effects on the health as well as on the tempers of children.

The Hindoo nurses manage admirably in this respect. They let their children roll constantly on the floor or on a mat, and they have very little trouble with them. When quite young, the infants lie on their backs as quietly as turtles, and this, merely because they have been taught to do so. Children under such nursing, are said to be the finest in the world; and it is likewise said, that when the European children leave their Hindoo nurses, which they constantly do when about two years of age, they become sickly. It is true that this ill-health is attributed to the influence of the climate; but as their mode of life is then changed, it is perhaps more reasonable to suppose that it arises from that as a cause rather than from the climate, which ought to have acted on them as universally before as after that time.

A lady who had been in India corroborated the above statement, and bore ample testimony to the advantage which arises from the good practice here alluded to. It seems that the children are placed on the ground with a quilt of about a yard square under them. This quilt is called a Goodray; at least, the sound suggested that mode of spelling the word. They are seldom, if ever, in the arms; and, when carried into a room to company, they are laid on a tray, often quite naked, and with only a piece of muslin thrown over their bodies. This lady said, that children when so nursed, *acquire the use of their limbs* much earlier than such as are brought up in a different manner: and in corroboration of the fact, as well as of the more interesting circumstance that the plan is equally applicable to the education of European children when in their own country, the lady entered into some details of the manner in which she had treated her own children.

They were scarcely ever permitted to be on the knee; but were laid on the floor or on a crib, during almost the whole day, and they were all of the most healthy description. The eldest child raised himself from the horizontal position and sat upright at four months old, at between nine and ten months, he had taught himself to get up by the help of a chair, and to travel round the room from chair to chair. The three other children were equally forward; and doubtless it is very unusual to see children do so much when treated in the common way.

The Italian mode of nursing is less philosophical though it is not less explanatory of the ease with which children may be taught to submit almost to any thing. It is said to be the custom in Italy, to swathe the children with bandage after bandage, until they have the appearance of a large doll, and are equally incapable of bending their limbs. When thus confined and converted into mummeries, their nurses, it is said, stick them between their arm and body with the face outwards, and leave them there unnoticed during almost the whole day. If children can be taught to submit to treatment like this without repining, there can be no doubt of their being easily led to perform the more agreeable office of lying at their ease on a bed or rolling about the carpet.

" In Canada, Virginia, the Brazils, and other American provinces," says Dr. Willich, " children are generally laid naked on raw cotton, in hammocks or cradles covered with fur." In Peru, children are placed with a few clothes round them in shallow pits dug in the earth. " In some parts of North America, infants are generally laid on couches filled with the dust of worm-eaten timber: this simple contrivance answers the useful purpose of keeping them dry and cleanly; as the powdered wood absorbs all moisture. When they are able to move, the solicitous mother incites them to meet her by presenting the food appointed by nature. Thus, it is almost inconceivable, that little savages, at the tender age of a few months, especially in Africa, should possess such strength and agility as to embrace the waist of the mother with their arms and legs without the least fear, and imbibe the maternal gift while she is engaged in fatiguing pursuits. In that country, it is truly astonishing to see infants, two months old, creeping about, and others, somewhat older, walking upon their hands and knees, almost as speedily as adults." "On the contrary," says Dr. Willich, "in our quarter of the globe, it is not uncommon to see boys several years old, nursed either by the breasts of an ill-advised mother, or with spoon-meat on the lap of an effeminate nurse."

If these facts and reasonings be substantiated, it is not doubtful, that the present mode of nursing children in this country is an improper one. It seems to be unnecessary for a child to be nursed at all, at least as the expression is commonly understood. Of course, the nurse is sometimes obliged to take the child on her knee, for the purpose of doing for it the necessary offices of cleanliness and of the toilet, but for all other purposes, it is evident, that a bed on the floor, or a basket with a mattress or pillow in it, is the best situation, in which it can be placed.

When the child is dressed then for the first time, it should be placed either in bed, or, what is better, in a warm cot, and be only taken out of it for the purpose of being fed or dressed or made clean. It will soon become as much attached to this domicile as it would have been to the knee of its nurse. At convenient periods however, and especially after a few weeks have passed away, it may be placed on a pillow or mattrass on a low basket or high tray, and then the nurse may pay the necessary attention to it when awake by placing the basket on the table or on a chair by her side. In this way the child will get air; and, if opportunities be taken of uncovering it, exercise in abundance and of the best kind may be taken. In like manner, if the weather be cold, by placing the basket on the rug before the fire, the child may be sufficiently warmed without difficulty.

All the other little difficulties which nurses will assuredly raise against this plan may be considered in a similar way. It would seem as if nurses were fond of trouble; for it is almost impossible to make them alter old customs however inconvenient those customs may be to themselves. It might be supposed that a nurse would be glad to escape from the trouble of having a child constantly in the arms; but no, it is generally in vain to show them how they may remedy the inconvenience.

As the subject of nurses has thus occurred, and as the early welfare of children is too much dependant on these persons, it may be as well to make some further observations on nurses in this place. Nurses are of three kinds, monthly nurses, wet nurses, and common nurses.

The present system of *monthly nursing* is far from being a good one; and this partly arises from a fault for which the ladies themselves are a little responsible. Monthly nurses have too much influence; they are made too much of. It is the fashion to give more importance to the business of lying-in than belong to it. It certainly happens, that sometimes a lying-in room is a scene of great distress and of danger; but in the majority of cases, to bring a child into the world is an action of health rather than a process of disease. Women in such a situation require abundance of care indeed, because the constitution is then very susceptible of receiving impressions of every kind; but, it is a species of care, which may be administered by any ordinary female of good sense, who is willing to receive instruction. In like manner, the care of an infant is a very simple matter, which requires no particular abilities for its proper administration. And yet, both with regard to mother and child a great mystery is made of the business, and a degree of importance given to nurses, which by no means belongs to them.

It is certainly convenient to have females about us at such times, who understand what is commonly required, and can fulfil certain necessary but really humble duties promptly and without any particular directions being given at the time. There are certain peculiar details as relating both to the mother and child, which require, in the same way, to be known before they can be conveniently performed; and hence, it is almost necessary to have a person at such times in attendance, who has acquired the customary knowledge by practice and experience. It is proper also, as the attendance on a lying-in woman is often a post of great fatigue as well as anxiety, that a monthly nurse should be well paid for her trouble; but none of these circumstances form a reason why she should be magnified into a person of great importance; into one, against whose dicta there lies no appeal.

It is true, indeed, that cases do exist where it would be advantageous if she were made thus important; as where inattention to directions on the part of the patient is likely to be attended by inconvenience or danger; but then it must be under a very different order of things than the present. Nurses must be better qualified to give advice before they can act the part which they at present assume. Ignorant as almost all of them are of the principles which ought to guide medical practice in such cases, or rather, when we find them thoroughly embued by the prejudices and vulgar errors of former times, it is not wonderful that they exert a deleterious influence wherever they put themselves forwards beyond their proper sphere. And that the great majority of them do play the part of doctor as well as of nurse, and, as by dint of mysticism and delusion, they have succeeded in making themselves very important personages in a lying-in room, it is incredible the evil they often do, not to mention the ridiculous restraints which they lay on their patients.

It appears to be almost absurd to mention some of these follies. A practitioner the other day found his patient and her monthly nurse in high dispute whether her gruel should be sweetened with brown sugar or white. The lady, with natural good sense, as well as a Highgate-like preference for white sugar, was not able to understand how it was of so much consequence for her to take brown—but the nurse would have carried her point, if the practitioner had not sided with the lady, and put the whole matter into a point of view too ridiculous to be discussed. Indeed, it would be highly amusing to hear the extreme absurdity of the reasons which nurses often give for their opinions; but when the influence that these opinions exert is hurtful, as it is in very many ways, it becomes necessary to discuss the matter with becoming gravity.

Perhaps the only curious fact of it is that well-informed women should thus suffer themselves to be the dupes of opinions and dicta, the fallacy of which they would certainly perceive were they hazarded on any other occasion; but the fact is, that they are spell-bound by the operations of their own fears. Let them consider their situation in its right light, let them only take the bringing a child into the world for as much as it is really worth, and they will cease to be the victims of follies such as these.

But how does it happen that nurses set themselves against improvement, and give themselves so much unnecessary trouble? The fact itself forms the reason—for if they did not give an undue importance to the performance of trifles, if they permitted the subject to be looked on as a plain matter of common sense, their reign would be at an end. Hence they make a great point of performing for their patient the most silly offices, and hence the process of nursing and dressing and taking care of an infant becomes mysterious in the highest degree, and much evil ensues therefrom.

With regard to the mother, as the whole of the evil is perhaps resident in the inconvenience to which she subjects herself unnecessarily, it is not of great consequence to remedy it unless she likes; but with regard to the child, the case is very different. One of the great objects of these essays is to show how much good or harm is done to an infant during the earliest months of life, and therefore this digression on nurses may well be excused; and the nurses themselves, if they were amenable to reason, would not object to the severity of some of the expressions, because they would see, that the welfare of children requires that nursing should be conducted on different principles.

In penning this anathema against nurses, it would be very unjust to many individual monthly nurses, if the good sense which they carry into a lying-in room, the intelligence which they display in cases of emergeny, and their readiness to receive and act on the directions which are given to them were not mentioned, and acknowledged with gratitude. A really good nurse is a very valuable person, one indeed who cannot be too highly prized; and if those who do not rank in that class could see how much higher their credit would be raised if they acted differently, they would give up that disgusting quackery which marks their present conduct and become really valuable and efficient servants.

Monthly nurses do indeed exert much influence over the infants with whom they are connected. Infants will be lively and quiet under one nurse, whilst under another the same infant would probably be dull and would constantly cry. But if the processes of dressing and nursing were simplified in the way which is recommended above, and especially if ladies would teach themselves how simple and easy to be understood all these matters are, the influence of nurses would soon cease to be deleterious, and the comfort of both of mistress and child, yes, and even of the nurse, would be greatly increased.

With respect to wet-nurses some remarks will be made in a future page, and with regard to common nursery servants, it will be unnecessary to say much. If mothers superintend their own nurseries and have only resolution enough to see that a rational system be acted on in the care of their children, almost every nurse-maid may be made a good servant, if she be good tempered, and the nursery will become a source of comfort to the household, instead of being, as it usually is, a scene of contention and confusion, and the cause of great discomfort to all parts of the general establishment.

As it is, the management of nurseries is left too much in the hands of the head nurse, as she is called; a person who is chosen as the superintendant, from the supposed advantages of her having had much experience in the care of children. When a person is experienced in ways that are good, the more extended her experience may be, the better the person is; but the converse of this proposition holds equally true; and therefore as the generality of nurses are unskilled in the proper mode of managing children, extent of experience must be an evil instead of an advantage.

Observe minutely the affairs of any nursery; take notice why the children are fractious and see the mode in which they are treated when thus obstinate and self willed—mark also the language which is held to them, the food which is placed before them and the general habits which are hour by hour inculcated, and then it will be no longer a mystery why children should be as faulty beings as we generally find them, and that their health should be so almost universally deranged. But as the practices of the world are improving in this respect, many nurseries now exist in which the business is carried on in a very different way, and the alteration which may be perceived in the tempers and health of the children is very great. In several instances the early branches of a family have been unhealthy and the medical man has been in almost constant attendance on the children. Two striking instances of this kind occur to the writer's recollection. In both these, the first children were unhealthy and difficult to be managed, and almost constant medical attendance was required. Gradually, however, a better system was introduced, and now, month after month passes away without the medical man's attendance being desired, and this although the number of children has been proportionably increased; the children indeed are the picture of health and as an almost necessary corollary, their dispositions and tempers have undergone a corresponding improvement.

But in both these cases, the female head of the family has been the superintendant of the nursery, and whilst her good sense has led her to the improvements which have taken place, the nursery servants have unconsciously become very good servants. They are really good servants without being aware of it: they are not in their own opinions experienced nurses though they are so in reality.

Such are experienced nurses; they are to be bred rather than bought at present; but as a better system is in progress, the time will probably come, when those good nurses, who are now an exception to the general rule, either from the operation of their own good sense, or from the superior tuition which they have experienced, will form the bulk of those who offer themselves as nursery servants.

It is easy then to deduce from these details, how infants ought to be nursed. As has been said, they should never be on the knee, except when they are dressed or fed; they should be constantly in the horizontal position, at least until their own feeling of strength prompts them to roll over and stand upright; they should be treated like rational beings, be spoken the truth to, and be never deceived, nor permitted to find that they can avoid the necessary evils by which they are surrounded. On the other hand, they should be put to as little inconvenience as possible, and be talked to and amused as much as can be conveniently done; but still they should be allowed as it were, time for reflection: objects should be placed before them, and within their reach, and time should be given to them that they may observe and contemplate them at their leisure: when carried about, it should rather be on a tray than in the arms, and thus, as far as can be done, they should be made independant and rational beings.

Were children nursed in this way, it would be an easy thing for one experienced person to take excellent care of many infants. She would have each in its separate cot or basket, and as near to her as possible; she would perform the necessary offices for each in succession, and still, abundance of time would remain for amusing them, and giving to each such mental instruction as its slender powers would fit it for receiving.

Even the whole party might be duly exercised in the open air, under this arrangement; for if all the trays were carried out of doors, and a sufficient increase of covering made to provide against the cold, the infants would receive all the advantages of the free air, as well, when their tray was motionless, as if they were carried about in the arms of the nurse.

Children, nursed in this way, would very seldom cry, if ever they would; their health would be perfect, at least if they were fed properly, and not exposed to cold or other causes of disease; and their bodily as well as mental powers would be developed much earlier than if educated in the old principles. By the time the teething commenced, at seven or eight months old, they would have become little sturdy active creatures, able to roll about the floor, and move themselves from place to place, and before the expiration of the first year they would walk alone, and be in other respects very intelligent little beings.

Art. 3. *On the Care of Setons, Issues and Caustics.*

The application of these remedies to the cure of disease has been sufficiently discussed in the two last numbers: it only remains therefore to give such directions respecting the care of them, as will tend to increase their efficacy and lessen the inconvenience which accompanies their use.

All these remedies are used with the same intention; namely to create an inflammation beneath the skin, and a discharge of matter from the surrounding arteries, the principal effect however being produced more by the irritation than by the quantity of discharge. In all of them a species of ulcer is formed, and in all of them that ulcer is kept in a state of irritation, so as to lead it to discharge matter, by the presence of a foreign body. The seton is formed of a number of threads of silk, which are passed under the skin and there suffered to remain. Of course, this foreign body produces inflammation; and ultimately purulent matter is secreted and is discharged in a greater or less quantity, according as the irritation is kept up in a greater or less degree. In the case of an issue, a cut is made in the skin, and this wound is prevented from healing by the insertion of one or more peas between its lips. A caustic is merely a larger kind of issue; but as it would be inconvenient to make so large a cut in the skin, and also as certain advantages are supposed to be gained by forming the ulcer in a different way, the usual plan is to destroy the required portion of skin by means of some burning substance or caustic. Pure potash, quick lime and soap, lunar caustic and corrosive sublimate, are each used for this purpose; and in every case an eschar or dead part is formed, which after some days suppurates, and the ulcer is kept open by the insertion of as many peas as may be necessary to preserve it from becoming smaller than is proper. The peas in both these cases act as an extraneous body in the same way as the skein of silk does in the former case of the seton.

It is necessary to attend to several circumstances in taking proper care of these ulcers. Several of these particulars refer to all of them collectively; the remainder relate to them individually.

They all require to be kept very clean; and this for several reasons. If they are not cleansed daily by ablution with warm water, the discharge which remains round the edges of the sore, acquires an offensive smell. Moreover, as it becomes hard when dry, it produces irritation by its mechanical pressure, as well as by the acrimonious properties which it acquires by putrefaction. This irritation is shewn by the presence of itching, which is often carried to a very unpleasant extent, or is in other cases attended by pain. In other cases, where the skin is particularly irritable, the presence of this discharge occasions inflammation, which sometimes even becomes dangerous. All these evils may be averted by attention to cleanliness; and it will be necessary that the sore be washed with warm water, so as to remove every particle of adhering discharge at least once every day. The surrounding skin too should be made dry by means of a soft towel before the part is dressed.

All of them require a certain degree of pressure to be applied. The mode of accomplishing this, as well as the best method of binding on the compresses when necessary, are pointed out in Vol. 1, pages 265, 266, when describing the mode of securing blisters in their situation. In most cases however, the sticking plaister which is used in dressing these sores will be found sufficient to keep up the necessary pressure as will be explained below.

In each of them it is often necessary to use some stimulating application for the purpose of increasing the quantity of discharge; but as the mode of doing this varies in the separate cases it too will be spoken of under each head as it occurs.

In making a seton, a fold of the skin is pinched up by the left hand of the operator and one hand of an assistant, and the silk or other convenient substance such as oil-skin, &c. is passed through the fold by means of a seton needle, which is a flat spear-pointed instrument, having an eye at the other extremity for receiving the silk; or, it will be sufficient, if the assistant be steady, to use a broad lancet in making the incision, and to pass the silk through by means of an eyed probe or a common silver bodkin. If the skin be then permitted to regain its natural situation, it will be found that the silk has passed for a considerable space under the skin.*

Very little blood is lost in making a seton, at least in general; but in one case, where the patient was a child of a year old, a small artery was divided in passing a seton in the back of his neck, and it was impossible to stop the bleeding without laying open the whole extent of the seton for the purpose of securing the artery. This, however, was an uncommon case, for there are no large arteries near the skin at the back of the neck; but it is probable that the bleeding was kept up by the artery being only in part divided, so that it had lost the power of obliterating its cavity by the contraction of its edges. When the bleeding has subsided in common cases, the two ends of the silk must be crossed over each other, and secured in that situation by means of sticking plaister.

It will be unnecessary to remove these first dressings until twenty-four hours have elapsed, because the process of suppuration will not have commenced before that time. Afterwards it will be proper to dress the seton every night and morning. In many cases the paucity of discharge makes it unnecessary to change the dressings oftener than once in the day; but, whenever this is the case, the seton is not as active as it ought to be, and it will require to be stimulated as will be described below.

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* Besides skeins of silk and strips of that green, smooth, painted cloth which ladies use in working patterns on muslin, the Surgeon's Instrument Makers sell a prepared seton-thread which is perhaps less troublesome than either of the above. It may therefore be used instead of the silk, &c. if it be preferred.

In dressing a seton, the plaisters must be carefully removed, and the part washed until it be clean. The silk must then be freely moved about under the skin, and when the ends are tied together by means of a single hitch, the parts which pass out from the skin must be secured in their situation by small cross-strips of sticking plaister, and a compress and bandage if necessary.

Setons ought not to be painful, and therefore whenever they are so, unless it be from the inflammation running too high, which very seldom happens, it may be concluded that they are mismanaged. The common cause of pain in setons is, that, unless care be taken, granulations are apt to form on the edges of the wounds and by increasing until they form small raw tumours, to become very tender and painful: in short, what is called proud-flesh arises. The edges of the wounds ought to be perfectly flat, and therefore whenever they become rounded and covered by raw-looking granulations, this proud-flesh must be taken down by the daily application of lunar caustic. The caustic must only be lightly applied in its dry state, and the sign of its being sufficiently done, will be that the raw surface will be covered by a thin white film.

It is very necessary to check the growth of these granulations; for, not only, they give much pain when present, but, if they be permitted to become very large, the skin will in time grow over them, and thus a lump is left on the skin after the seton has been healed, which cannot be removed unless by the knife or ligature, or by the free application of caustic. A young lady had a seton in the back of her neck. The granulations formed very luxuriantly: they were neglected and in the course of a few weeks, two considerable tumours had formed and as the skin had grown over them, the ends of the silk appeared as if they came out of two little hills of flesh; and it was necessary to apply caustic very largely every day for a considerable period, before these tumours were reduced to the level of the skin. If this had not been done, the young lady would have had ever after, two conspicuous lumps on the nape of the neck. The whole would have been prevented by timely care.

To shew how painful these granulations often are, it may be mentioned, that a lady complained of a seton in her side being so painful that she could not bear the slightest pressure of her clothes, nor to turn her body towards either side. On examination, it was found, that a small pea-like tumour of granulations had formed on the edge of one of the little wounds, and that this was so tender as not to bear being touched. It was removed by means of caustic, and the part became quite easy.

It sometimes, though very rarely happens, that small abscesses like boils will form near the wounds of a seton. These will merely require to be treated by poultice, &c. like other similar affections and they need not interfere with the continuance of the seton.

The matter which is discharged from a seton should be yellowish and thick. If it be thin it is a sign that the health of the body is in a deranged state. It should also be tolerably copious, comprising nearly a tea-spoonful in the day, or enough to make the wounds run down with matter when the plaisters are removed every morning and evening. Setons however, not uncommonly become indolent and the discharge is inconsiderable. This arises from the part becoming so accustomed to the presence of the silk, that the latter ceases to be an irritating body, and the discharge, which is only kept up by the irritation, ceases. It is improper for the seton to lapse into this state of inactivity, because, as the whole efficacy of the remedy resides in its being active, not only is the great inconvenience of attending to it submitted to without an advantage being gained, but the patient may be often led to blame the seton for being useless, when the cause of its inefficacy arises solely from mismanagement.

Whenever therefore a seton becomes indolent and ceases to discharge, a new irritation must be produced in the part and that irritation must be renewed from time to time as occasion may require. The best plan of doing this is to withdraw in part the silk, and apply some stimulating substance to that part of it which will be under the skin when it is replaced: for by so doing the stimulus will be transferred to the raw internal surface of the canal which is under the skin, and thus the discharge will be increased in quantity. A very small stimulus will be sufficient to answer the purpose; as for instance, wetting the silk with a solution of one or two grains of blue vitriol in an once of water, or of white vitriol; or even a somewhat stronger solution of common salt will be sufficient. Any of the stimulating ointments may be used for the same purpose; such as the citrine ointment, or the golden ointment, a bit as large as a small pea being spread over the silk: or the blistering ointment may be used; but in this case the quantity used must not be above half as large. In short almost any kind of stimulus will answer the purpose if it be not used too violently.

The silk of a seton should be withdrawn entirely and replaced at least once in every three or four weeks: for not only will the stimulus of a new silk be advantageous, but the old one is liable to become contaminated by being constantly soaked in discharge; and where setons are neglected, it will not unfrequently happen that the acrimony of the foul silk will produce a disagreeable inflammation of the surrounding skin. The smell of the wound will also become offensive.

The mode of changing the silk is to lay one end of the new silk over one end of the old one, and to bind them together, so as to form as small a cord as possible; then, if the old silk be withdrawn, the new one will be made to occupy its vacant place. In one case, where, in spite of the greatest cleanliness, a seton was very offensive, the silk was changed every day in the following manner. A long silk was used in the first instance; a small portion of it only was drawn through at first, and thus by drawing a little more through every day and cutting off the portion which had been used, a clean silk was applied to the wound daily. Of course a new silk was joined to the end of the old one when the latter was exhausted.

If a strip of oil-skin be used instead of silk, the transference is made by sewing the tapered end of the new piece, to the old one and drawing them both through the wound as in the former case.

When it is desirable to heal up a seton, the silk must be withdrawn, and a strip of sticking plaister applied so as to draw the lips of the wound together, caustic being used if the granulations rise above the skin. In general the part will be healed in two or three dressings unless there is much proud-flesh.

It only remains to say respecting setons, that, whilst it is useless to continue the application of a seton when it ceases to discharge, so it will be better, in the majority of cases, not to continue the same seton open for more than three months, but to heal it up and have a second inserted in a somewhat different part. The advantage of this is, that a perfectly new irritation is thus set up, which will be more efficaceous than the old one was, however well it might discharge; for the parts become accustomed even to a state of irritation, and thus an old seton will at last be almost useless under any circumstances

Issues, like setons, are formed by pinching up a fold of the skin, but, instead of passing the seton needle through it flat ways, a lancet is used, and it is passed in vertically so that the cutting edge, instead of making a horizontal hole, is directed so as to divide the skin entirely. The skin is then allowed to regain its situation and of course a long cut is left in the skin. After the slight bleeding which follows this instantaneous and not painful operation has subdued, one pea or more must be inserted and a strip of sticking plaister be placed over the wound.

The plaister may be removed on the next day, when it will be found, either, that the peas are loose in the wound, or that a sufficient discharge or matter has not taken place to allow of their being removed. If they can be easily taken away, others should be inserted and the wound again covered by means of plaister. In a few days the peas will form a bed each for themselves; so that they will be, as it were, buried in the skin of the part. This is the proper state for an issue to be in; and therefore if the peas rise ever so little above the surface of the skin, it is a proof that sufficient pressure is not made on the part. And hence arises the chief difficulty of keeping an issue in proper order. The granulations are so apt to shoot up, so as to fill up the artificial cavity which has been formed, that, unless great care be taken, the peas will be pushed out and the issue become inefficaceous.

To obviate this, pressure must, of course, be used and there are many ways in which this may be done. Wherever gravity will permit, that is where the issue is not underneath or on perpendicular surface of the body, the application of a small piece of sheet-lead on the plaister with a roller over it will be sufficient to answer the purpose: and, whenever the issue is on either of the round limbs, a roller and compress may be always so applied as to secure the necessary pressure. The head and body are the most unfavourable parts for making this necessary pressure on. With regard to the body, the best plan is to apply a sufficient number of compresses and to secure them by long strips of adhesive plaister applied across each other like an X. (see vol. i. pages 265 and 266.) The difficulty which occurs in attending to issues on the head arises from another cause. The growth of the hair, for it is of course necessary to shave the head, prevents the plaister from adhering, unless the head be shaved oftener than the generality of persons will submit to. It should be done, at least round the issue on every other day, and then the difficulty will no longer exist: but in cases where this is inconvenient, the only alternative is to apply a bandage round and across the head on principles which none but a person who is experienced in the theory and practice of bandaging can understood. The nearest approach to such a bandage is for a fillet to be applied round the head above the ears and a cross band to be passed from different points of this fillet over the issue; a band being placed in like manner under the chin to secure the fillet from rising upwards, if necessary.

When the granulations rise up round the peas and form small and often painful eminences above them, they must be kept down by pressure as is directed above, or if that be not sufficient by the application of caustic as is described when treating of setons. (See page 77.)

The same methods too, as are referable to setons, are to be practised, when an issue does not discharge sufficiently. Stimulants must be applied to it, and fortunately this can be done more easily than in the case of setons. A small quantity of blistering ointment or of any other stimulating ointment being put on the peas will answer the purpose; but the best plan is to soak a number of peas for a few hours in a solution made by dissolving six grains of sulphate of copper or blue-vitrol, as it is called, in four table spoonsful of water, and after they have become dry, to apply those instead of unprepared peas.

The general principles which refer to the proper time and mode of healing up issues are similar to those which regulate the treatment of setons.

It is not necessary to say much respecting caustics. They are, in fact, only large issues, and therefore the treatment of them is to be regulated by the same principles in all respects. Caustics are often made large enough to contain ten or twelve peas; but if the principles of management be understood, it is easy to keep them in proper order. They are generally applied on each side of the spine or on the hip or near the knee.

Caustics are formed by destroying a portion of the skin by means of a corroding substance. The neatest way of doing this is for the surgeon to rub the wetted end of a piece of pure potash on the part until a brown eschar be made;

because then the proper size of the caustic is secured. But in general a piece of sticking plaister is placed on the skin with a hole in it of a rather smaller size than what is desirable for the proposed caustic: to mix pure potash with soap into an ointment, or soap and quicklime, or lunar caustic and spermaceti cerate in like manner into an ointment, and to put as much as is necessary of any of these compounds spread on a bit of lint upon the exposed surface of the skin, covering the whole by means of more sticking plaister. The caustic will be formed in a short time so that the whole should be removed in about four hours. Another mode of making a caustic is to scarify the skin by means of a cupper's scarificator and to apply upon the incisions corrosive sublimate reduced to a fine powder.

In whichever way the eschar is made a warm poultice must be applied over the part and be changed twice a day until the schar has seperated, when peas must be introduced as in issues, and a sufficient pressure be used to oblige them to form a bed beneath the skin as in that case. The after-treatment is comprised in the observations which are made in an earlier part of this paper.

Miscellaneous Department.

ART. 4. REVIEW of

A Treatise on Acupuncturation, being a description of a Surgical Operation originally peculiar to the Japonese and Chinese, and by them denominated Zin King, now introduced into European practice, with directions for its performance, and cases illustrating its success. By JAMES MORSS CHURCHILL, *Member of the Royal College of Surgeons in London.* LONDON, *sm. 8vo. p.* 86, *with a Plate,* 1821.

IT is not generally known that a needle or other sharp instrument of a similar kind may be thrust into various parts of the body, without giving more than the most trifling pain. Particular persons for instance, are in the habit of surprising their friends by forcing a pin to the head in the calf of their leg. The operation is not painful, neither is it injurious to the body, if care be taken to avoid certain parts under which the large blood vessels and nerves are situated; but it would seem moreover, that puncturing the skin and muscular substance has long been used as a remedy for the cure of various diseases, and by Mr. Churchill's account with singular success.

This odd remedy has been principally used by the nations of the east, especially the Chinese and Japonese, and its use is described by Ten-Rhyne, Bidloo, Koempfer and Vicq-D'Azyr. It seems too that analogous remedies have been also employed by people of another quarter of the globe. Mr Wafer, for instance, relates that the Indians, living on the Isthmus of Darien, draw blood in the following curious manner. "The patient is taken to a river and seated upon a stone in the middle of it. A native, dexterous in the use of the bow, now shoots a number of small arrows into various parts of the body. These arrows are prepared purposely for this operation, and are so constructed that they cannot penetrate beyond the skin, the veins of which, opened by the puncturation, furnish numerous streams of blood, which flow down the body of the patient."

The process of acupuncturation then has been long in use; but we dare say that it has never before been favored by so fine a name. We are glad however that this name was not given by our worthy author, but by the French; for acupuncturation is a barbarous word compounded of one greek and one latin word, *acus* being the greek for sharp, and *punctura* the latin for a puncture.

The chief writers on Acupuncturation have been M. Berlioz of Paris, who published his Memoire sur l'Acupuncture, &c. in 1816, and Dr Haime of Tours who has published a paper on the subject in the Journal des Sciences Medicales, Vol. 13.

The eastern nations were accustomed to use only instruments made of the purest gold or silver; Europeans however more wisely employ needles of steel. The operation consists of pushing a steel needle into the skin, and then by a twirling motion forcing the point as far into the fat and muscular substance as an inch and a half. The instrument is permitted to remain there for five or six minutes, and the beneficial effects frequently follow so suddenly, that the patient is cured before the needle is withdrawn. In many cases however several punctures are made whilst in others, as pain is driven away to some other part by the first puncture, the second and future punctures are immediately made in the part to which the pain has retreated.

The Asiatics use the needle in this way for colic, tympany and other complaints of the bowels; they puncture the head for headache, for comatose affections and for ophthalmia; the chest, back and abdomen too, for the relief of pain in those parts and for "Dysentery, Anorexia, Hysteria, Cholera Morbus, Iliac-passion, &c. They also relieve local diseases of the muscular and fibrous structures of the body by means of the needle. The French authors however, and with them Mr. Churchill, and Messrs. Jukes and Scott, both of Westminster, the last of which gentlemen it would seem introduced the remedy to English medical men, seem to use it almost entirely in chronic painful diseases, as in old rheumatic pains and other disorders which are unattended by symptoms of inflammation or fever. Many nervous diseases are to be included in this list.

In such cases as these the relief is often almost instantaneous. Dr. Haime describes a case in which a young female who had suffered from rheumation was found in the following state. She was unable to breathe on account of a very painful affection of the respiratory muscles, her voice was very plaintive from the same cause, she could not move, and her body was covered with cold sweats. A needle was passed to the depth of an inch "at the inferior cartilages of the false ribs," and retained in that situation for five minutes. The pain instantly receded; but it attacked the abdomen. A puncture or two followed in that part, and the patient was perfectly relieved. Her breathing became quite easy, and she slept for eight hours. It was necessary however to repeat the operation daily for four days, the pain having returned; but after the last of these operations the cure was permanent as well as complete.

A woman had long complained of wandering rheumatic pains in the shoulder and right arm. These pains were at intervals excruciating. There was no feverish symptom present. The needle was passed into the muscles of the arm at the seat of pain. The pain passed successively to the fore arm and hand, and as one puncture was sufficient to dislodge it from each of these parts the cure was completed at one series of operations.

A very long and interesting case of severe nervous affection follows. The patient was a young French girl, in whom violent vomitings attended often by convulsions had resisted all kinds of remedies for two or three years. Dr. Haime, with the assistance of Dr. Bretonneau, treated this affection by the needle. It was passed into the pit of the stomach, and "the instrument had hardly passed to the depth of a few lines when the symptoms vanished as it were by enchantment." The symptoms returned at the end of three days, but they instantly receded before the needle as before, and after a few slighter returns of the disorder, the cure was completed.

Mr. Churchill's own cases are then given. In one man who had been bent double for three days by the most severe spasmodic pains of the loins and hips, so that he had not been upright during that time, nor had he slept, his tongue being also white, and his pulse quick, the needle was passed to the depth of an inch and a half into the muscles of the loins. In six minutes the complaint had entirely disappeared, and it did not return.

In the second case, a young man sprained his back in lifting a heavy weight. The weight fell suddenly from his hands, and he could not raise himself up. The pain increased for three days, when one operation of the needle entirely dissipated the complaint; and although it was again employed the next day on each side of the spine, the operation was not afterwards required.

A case of extreme difficulty of breathing follows, which as it is almost the counterpart of the one mentioned above, we shall not extract it, nor the next for a similar reason.

The succeeding case is more important because the subject of it is Mr. Scott, the father of English Acupuncturation. In his case, the pain in his lions was terrible; but neither fever nor general derangement was present, and the needle was passed into the loins. "A sensation arose," says our author, "apparently from (at) the point of the instrument, which the patient described as resembling that which is produced by the passage of the electric aura, when elicited to a metallic point, diffusing itself at first to some distance around the part, and then extending itself up the side to the axilla." Four applications at different points were made, and thus, by one series of operations, the patient was perfectly and permanently cured. The electrical sensation only accompanied the first and the last puncture.

Mr. Churchill says that he could furnish other similar cases, but that he does not think more are required to prove his position, that the needle, as thus used, is a valuable addition to our means of curing diseases. He uses needles of steel, which have a handle to prevent them from passing further than an inch and an inch and a half into the body; but it seems that the French physicians use a needle which is three inches long, and even pass it so far in some cases as to puncture the viscera of the abdomen and chest. M. Demours raises a tumour on the skin by the cupping glass and exhausting syringe; because he says, this plan absolutely takes away the very small degree of pain by which the operation is accompanied under ordinary circumstances. By M. Demours', plan the instrument is passed through a collar of leathers at the top of the cupping glass, so that it pierces the tumefied skin during the time the cupping glass is applied. But Mr. Churchill says that this apparatus is not necessary. The Japonese, &c. drive in the instrument by means of a mallet. Mr. C. merely presses the point into the skin, and gives a rotatory motion to the handle as he presses forward. He permits the instruments to remain inserted for five or six minutes, and one operation is in general sufficient. When the pain is fugitive however it must be followed and punctured from all its recesses.

We have given a full account of this little work, first, because it is well and modestly written; secondly, because the accounts given are, as it is seen, of a highly favourable nature; and thirdly, because with ordinary care it seems that neither pain nor danger arises from the application. Indeed from experiments made on puppies by Dr. Bretonnean, it appears that the point may be passed into the brain, the heart, the lungs, and the stomach, without producing injurious effects. The arteries also have been punctured with impunity. Even in the human subject, Dr. Haime has often passed his needle through the coats of the stomach and penetrated its cavity and without evil results.

As some proof that this may be done with impunity, our agricultural readers will recollect that it is a very common thing to relieve tympany in cattle by puncturing the intestines, and an abundance of cases have occurred in which pins which have been swallowed have made their way out at various parts of the body without injuring the patient. In one of these cases, a medical friend informs us that the pins were disaharged from the skin without heads, and that at last, a collection of pins heads was vomitted up by the stomach, each of the wires having been unrolled and again contorted into various shapes. In more than one case, two of these wires seemed to be joined together.

In a somewhat similar case which occurred to ourselves, a woman imposed on medical men by inserting needles in various parts of her body, and letting the surgeons extract them by incision, after they had travelled in various directions under the skin. If we recollect however, this woman ultimately lost her life by abscess and other severe disease of the arm, which arose from retention of a number of these needles in an unfavorable situation.

Our author, Mr. Churchill, very properly abtains from offering any theoretical explanation of the mode in which his needles act; but he says they may be procured, furnished with proper handles, of Mr. Blackwell, Bedford Court, and of Mr. Laundy, of St. Thomas's Street in the Borough.

ART. 5. *On the Tooth-ache and the Face-ache.*

A correspondent who signs himself *Monchensis*, has favoured us, in a very obliging way, with his observations on several interesting subjects. On the present occasion, we shall give his remarks on the tooth-ache, with such popular remedies as he recommends for its relief.

We are all very glad to find ease when afflicted by the tooth-ache. Almost every body indeed recommends the extraction of the decayed tooth; but, whilst others, and those medical men, attempt to cure the tooth-ache as they would do any other inflammation or fever, the whole world is sufficiently ready to be eased of the pain without having the tooth extracted, if possible.

Common hartshorn, says our correspondent, applied by means of lint to the hollow of the decayed tooth is so efficacious in relieving the pain that he has never known it to fail, during a large experience of his own and of his friends.

It seems too, that Dr. Handel of Mentz recommends the following remedy, by saying, that the excruciating pain is almost instantly removed when the medicine is applied to the carious tooth. The prescription is a drachm of oil of henbane, six grains of extract of night-shade, the same quantity of camphor, half a drachm of opium, and eight drops each of cajeput oil and of tincture of cantharides. Oil of henbane is not commonly used in this country; but it is probably extracted from the seeds of the plant. It is of course an anodyne like the other ingredients; and therefore as they are of a sufficiently powerful kind, other oils may be substituted in case the oil of henbane cannot be procured. It is not likely that this latter oil is an essential or volatile oil; otherwise as a mixture of oil of mint and laudanum is another form of application for the relief of the tooth-ache, that or any other essential oil, as of cloves, peppermint, &c. may perhaps be used advantageously instead of the oil of henbane.

Our correspondent says too, that in some kinds of tooth-ache, a popular writer recommends fifteen grains of angustura bark to be taken every four hours. Where the pain arises from or is connected with certain disordered states of the stomach, medicine like this may be usefully exhibited. He mentions likewise, that Searman's tincture is very efficacious in relieving that distressing face-ache which so often affects females whilst in a state of pregnancy, if a little of it be held in the mouth on the affected side; and he suggests that a tincture of the anthemis pyrethrum or pellitory of the wall, is either identical with Scarman's tincture, or that it will probably be found equally effectual.

We thank our Kentish correspondent for his communication, and shall be glad to hear from him again. We would willingly act on some of his suggestions in the conducting of our journal, and hope that we shall be able to do so at an early period.

ART. 6. *On the effects of the Cow-pox in preventing the Distemper in Dogs.*

A writer on the subject of vaccinating dogs, for the prevention of the distemper, states, that James Dearden, Esq. of the Orchard, Rochdale, was unable for several years to rear a single dog. Whether he kept them at home, or sent them out to quarters, they all died of the distemper; but about four or five years ago, he began to have them vaccinated; and, since that time, not one dog has suffered from it. The operation has been performed when the dogs were from six weeks to two months old, and the matter has always been inserted on the inner surface of the ear, in a part as free from hair as possible. —Monthly Mag. No. 357, Aug. 1821.

Art. 7. *Improved Mode of Salting Meat.*

Mr. John Oldham, of the bank of Ireland, employs the air-pump for impregnating substances with different fluids in a new and ingenious manner. If meat, which is covered by brine, be placed in a vessel, and the superincumbent air be exhausted by means of an air-pump, the small bubbles of air which pervade the substance of the meat are expelled, and on or before the readmission of air into the vessel, the brine is made to occupy their place in every part of the meat. In this way, the salting process is more perfectly performed, and what is better, the air which is one grand cause of putrefaction is perfectly expelled from the meat. In like manner, the pyroligneons acid may be applied more certainly by this mode than by the common process of dipping the meat or brushing it over with the acid.

Mr. Oldham employs his invention principally for the purpose of wetting and sizing paper, but it is applicable to very many operations in the arts; such as dying goods equally, or impregnating them with different fluids. Perhaps the subsequent application of the condensing syringe might further tend to force the fluid more equally into the interstices of the substances to be impregnated.

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Original Department.

Art. 1. *November.*

The gloomy month of November is now come, with its hoarse winds and frequent storms; its leafless trees and deluged fields. For the equinox has now fairly poured its wrath on the earth, and has saturated the very clothes we wear with moisture.

Not that it is moisture alone which produces uncomfortable feelings and disease. Other times of the year are damp and the air is frequently filled with water; but still we feel as if we disregarded it, and it is not until dreary November approaches that we shiver under the heavy dampness of the atmosphere.

The reason of this difference is, that moisture without cold is not disagreeable, and cold without moisture is equally innocuous; but it is only perhaps at the beginning of winter that wet weather and a cold atmosphere so decidedly meet together.

The winter's frost has not yet arrived ; the thermometer keeps many degrees above the freezing point; but is still low enough to produce all the evils which are hinted at above.

When the cold becomes more intense, the moisture is as it were dried up by being converted into ice; but in the few weeks which precede this period, a state of atmosphere prevails which is at least the most disagreeable to the feelings of all others, if it be not the most productive of disease.

It would seem that the constitution has but little power of bearing up against the application to the skin of moisture joined with cold. A dry cold air invigorates the habit, and warm damp weather, if not absolutely pleasant, is far from being disagreeable. But when cold and moisture are joined together as in November, the sensations are most uncomfortable, the spirits fail, the body is relaxed, and none but the strongest constitutions are able to bear it.

Hence arises the old saying, that an Englishman hangs himself in November.

The cause of these phenomena is not very clear : but as neither cold nor moisture do the same thing individually, it must follow that the junction of the two calls some third circumstance into play, which, joined with one or both of the other two, produces the effects in question.

This third something is probably electricity. It is quite certain that the state of the body, as far as its electricity is concerned, exerts a great influence over the health. If the body be full of electricity, its powers are in their best state; on the contrary, let the body be robbed of its electricity and how certainly does the reverse happen.

Now the air, when dry, is a very bad conductor of electricity. Hence in a hard frost, the spirits are light and we feel as if we could scarcely contain ourselves. Even the horses are too full of life at such periods; the very cart horses gambol, and kick up their legs, instead of passing soberly along the street, as such solemn-looking animals ought to do. But a damp air conducts electricity with great facility; and hence, as the body is thus robbed of its cordial, it falls down inert and listless.

It is really curious to see the debilitating effects of November weather on the constitution. Exertion becomes labour, and actual labour is almost impossible; the head feels heavy or aches, and the whole man is unnerved.

Such occurs even to the healthy person, at least in crowded cities; whilst such as labour under disease feel it still more remarkably. Their complaints hang on and are not relieved by the accustomed remedies. If the disorder reside in the digestive organs, it is aggravated rather than relieved, and thus perhaps the doctor is blamed for an evil that arises from a much more infallible source.

The diseases of this month are such as were hinted at when speaking of October. They are of course more decided in their character as well as more aggravated in their form. Bronchial inflammations include nearly all the pulmonary complaints ; at least those of an acute character. The severer forms of cold are attended by a heavy constricted feel across the chest, without much actual pain ; the breathing is therefore difficult and laborious rather than painful, as if the effort was distressing rather from the effort itself than from the fear of its producing a stitch or catch in the side as in pleurisy. The cough is deeper and more open ; the breathing rattles on account of the presence of phlegm through which the air passes, and the expectoration is tenacious and ropy.

Asthmatic persons now also feel their complaints aggravated ; at least such as are affected by the moist forms of the disease, as they are called. Fevers of the low kind, run on to a great length and common fevers take on the typhoid character. Acute diseases become more liable to terminate in chronic complaints ; whilst the latter are very perceptibly aggravated.

Thus it is that a moist and cold atmosphere becomes so detrimental ; and hence November is deservedly called a dreary month.

But, as sometimes happens, but more commonly at the commencement of December, a sudden frost occurs and continues for a few days—what a change do we experience—the whole town is regenerated. The healthy man laughs at his uncomfortable feelings of yesterday; the invalid says her head-ache is quite gone; the dyspeptic feels invigorated and refreshed, and even those who labour under acute diseases respond cheerily to the improved state of the atmosphere.

The change is sometimes ridiculous. A medical man sees a number of patients to-day and they all complain of the fog and of the little efficacy of his prescriptions. A frost comes at night; and to-morrow he finds them all lively and mended in a really surprising way.

Unfortunately however, these beneficial results do not take place in all cases equally. For in some, a reverse effect too commonly follows. Convalescents from inflammatory diseases feel the bad effects of frost under these circumstances; and diseases, which would have passed away without inflammation being produced, if the weather had continued open, become complicated by inflammation immediately that the frost commences.

A change of this kind was marked in both these particulars very evidently some time ago. The weather had been very damp and cold, and the majority of the sick were stationary and desponding. A frost came, and thousands of blue devils seemed to have vanished. As a specimen of the rest, one young lady, who had complained of constant headache for a week, said that her complaint was quite gone.

But, the obverse of the medal was equally though not so agreeably marked. A poor little boy, who had escaped from a severe attack of inflammation of the lungs after measles, and was convalescent but very weak, lapsed again into inflammation as soon as the frost appeared and died in two days.

Thus does the same wind blow good to one and evil to another; but it is at the same time cheering to think that though misery and distress will come and are always present, yet that comfort and joy are the lot of some even under every change of circumstances.

The directions for the preservation of health during this month, and the greatest part of the next, may be comprised under a few heads. The coldness of the weather suggests the proper increase of clothing; but the flannel waistcoat should be changed the oftener, or a silk one should be worn over it; silk stockings also should be worn over others of a warmer description. In short, the electricity should be kept in by every possible means.

Moreover, the body should be fairly supported by nourishing food; but as, in the general torpor of the corporeal functions, the bowels are very likely to become torpid, and thus lay the foundation for future diarrhœa or other complaints of the digestive organs, enough gentle opening medicine should be taken to keep the alimentary passages clear and unobstructed.

OBSERVATIONS ON CHILDREN.

ESSAY THE NINTH.

ART. 2. *On the Food of Infants, &c.*

The food of infants forms the next object of enquiry. This is a part of the subject which requires the most attentive consideration. When medical men see daily and hourly, that the stomach is the grand route by which disease enters into the human constitution; when they observe that, with the exception of certain acute disorders and a few others, a healthy action of the digestive organs secures health throughout the constitution, and on the contrary that derangement of these parts predisposes the body to receive morbid impressions, and thus forms the avant-courier to numberless diseases and to states of permanent ill-health, they may well feel anxious to acquire accurate notions of what the proper food of infants may be.

Fortunately, there can remain no doubt on the subject. If man, meddling man would have humility enough to feel and believe that the Almighty power which created the world, knows better what is right than he can do, it would be evident to him, that the only proper food for an infant is its mother's milk.

If nature had intended that more than this should be given, we cannot doubt but that more would have been provided. Animals give nothing else to their young, for a certain time after birth; this period being quite as long in comparison, as that which nature has pointed out for the human infant. An animal never takes solid food until it has got teeth, and why should a child do more? In fact, no other food than the mother's milk is required. Dr. Clarke in his excellent Commentaries on the Diseases of Children* says, " The practice of giving solid food to a toothless child, is not less absurd than to expect corn to be ground where there is no apparatus for grinding it. That which would be considered as an evidence of idiotism or insanity in the last instance, is defended and practised in the former. If, on the other hand, to obviate this evil, the solid matter, whether animal or vegetable, be previously broken into small masses, the infant will instantly swallow it; but it will be unmixed with saliva. Yet, in every day's observation it will be seen, that children are so fed in their most tender age; and it is not wonderful that present evils are, by this means, produced, and the foundation laid for future disease."

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* Page 47.

"The power of digestion in infants is very weak, and the food designed for them, in the earliest period of their existence, by the author of nature, contains but a very minute quantity of nutritious matter, diffused through a large quantity of water, yet quite sufficient for all the purposes of life. It is taken very slowly into the stomach, being procured by the act of sucking, in which a great quantity of saliva is secreted and swallowed with it."

"Nothing can be more contrary to this, than to stuff a child's mouth and stomach with solid, perhaps animal food, or even to pour down its throat, with a spoon, milk and bread, or any other solid matter, without sucking, mastication, or the secretion of saliva."

"To give an infant the best chance of health, it should live exclusively upon the milk of a healthy woman, and that woman should be its mother, if she be healthy and capable of nursing it. Scarcely any thing will compensate for the want of this natural support. Multitudes of children die, literally starved, under the eye of parents who would shudder at infanticide and the exposure of children as it is practised in China; as if a speedy death were not preferable to a life cruelly protracted, in distress, pain, disease, and agony, and at last, miserably terminated."

"Such truths are very unwelcome, but they should be told and felt. The occurrence of the facts is not rare; but it is an evil of great magnitude and extensive operation, and every measure should be taken to discourage it. It is a lamentable reflexion that civilized society is inferior to that of barbarians and even brutes in that respect, who generally cling to the preservation of their young; and the lowest orders of animals will even endanger their own to protect the lives of their helpless offspring."

Dr. Clarke's opinion on this subject was formed after forty years of very extensive experience, and it is especially deserving of more credit, on account of the great opportunity which he possessed of witnessing the evils of an opposite line of conduct; for, in the early part of his practice, it was the universal custom to feed children much more improperly than it is at present; and the gradual change which has taken place in the treatment of children since that time, has been principally due to his unceasing exertions in recommending a contrary doctrine to his pupils.

Happily, it is not now necessary to use the strong terms, respecting this point, which Dr. Clarke found himself obliged to employ in his lectures. It seems now to be generally understood, that its mother's milk is the most proper food for a child. And yet, it is not generally acknowledged, how necessary it is that the principle should be acted on to its full extent, during the early months of the lives of London children. Medical men are still in the habit of recommending that infants should be *fed* in part, even from the birth; on the principle, at least, as so stated to mothers, of initiating the children early to take food, and thus to obviate the supposed difficulty or danger of a child's beginning it at a more advanced age; as if it was not as dangerous to begin it at one age as another, and even more dangerous, the earlier the period after birth.

Indeed one of the reasons for writing these pages was to point out, that my experience had decidedly led me to say, that whilst infants are almost always well, if fed solely on a healthy woman's milk, they almost invariably, at least in London, feel the bad effects of taking even the smallest quantity of extraneous food during the day or night. The infant becomes occasionally irritated and the bowels more or less deranged. On the contrary, when he is fed solely on the proper food, and has been allowed to go into the open air even much less frequently than it is my custom to recommend, abundant experience has shown me that his health is perfect, and continues to be so, unless the child is deranged by improper moral treatment, or by other faulty points in his physical education.

"From an authentic calculation made in France," says Dr. Sturve, "it appears that more than one half of those infants who were entrusted to the care of nurses, died previous to the third year of their age. Fourcroy, on the other hand, assures us, that of one hundred children reared at the maternal breast, not one lost its life during infancy."

It is right to press this point again and again; for it is very important that it should be properly understood.

It must be recollected, that it is only intended to discuss the subject of the proper food of infants on the present occasion. When the child is older, and when it has cut a part of its teeth, then the question occurs in a new light; and, though much difficulty may exist as to its proper elucidation, yet it seems the most consonant with the acknowledged laws of nature to begin to give solid food to a child when it has acquired teeth to eat it; but this part of the subject will be treated of under the head of weaning.

Immediately after a child is born it is customary to give it food and also medicine. Neither of these can be necessary. An infant's bowels will be cleansed, as it called, quite soon enough, if time be given for the natural evacuation of the meconium or dark green secretion with which they are filled; and it is an idle notion to suppose that children who take medicine immediately after birth, thrive better than those who do not.

Infants are often said to be flatulent when this opening medicine is withheld. It is doubtful whether any infant would be flatulent so soon after birth, if improper food were not given at that time.

The argument for feeding an infant on the same occasion, is, that as the secretion of the mother's milk does not take place until the second or the third day after birth, the child's constitution requires support during that period. This argument is probably fallacious. It cannot but be, as has been said above on another branch of the subject, that if food were really required during that interval, it would be provided by the author of nature. No artificial proceeding of this kind is perceived in the case of any of the other animals which suckle their young; the secretion of milk is late in some, and early in others; but in none of them is that impatience displayed, which leads the human subject to anticipate nature, and thus interfere with an order which is doubtless the proper one. Neither is it an argument that an infant will swallow the food which is put into its mouth. It has no power of selection, and would swallow poison as readily as food.

But whilst it seems probable that no advantage can arise from feeding children thus early, it is more than probable that considerable evils result from the practice. It may be, that the difficulty which often occurs in making infants take kindly to the breast arises from this cause; the system is oppressed by the unnatural load which has been laid on it, and it feels none of that appetite for the proper food which it would have had under more favourable circumstances. At all events this view of the subject is not an irrational one. Again, what is it that causes that eruption called the red gum, which is so universally found to affect young infants? Probably, this eruption would not occur, if the due order of nature were not thus interfered with. Eruptive disorders scarcely ever arise in children except when the stomach is deranged, and therefore it is probable that the red gum is occasioned by the indiscreet feeding of the infant which is alluded to above.

The experiment may be easily tried; for no infant will be starved to death, if kept without food for two days. In a case published lately, an infant lived for eight days with no opening into its stomach; and indeed this case bears in some degree on the necessity for giving opening medicine to new-born infants: the meconium came away in small quantities every day from this child until its death; thus showing, that neither medicine nor the first milk of the mother, which is supposed to be of an opening quality, are necessary for its perfect expulsion.

The most reasonable course then to pursue with a new-born infant is to give it nothing—neither medicine nor food; but to wait patiently until the secretion of milk take place in the mother's breast. This generally commences on the second day and becomes more perfect on the third; but, it will be proper to put the child to the breast very soon after birth. It will generally get something; but were it only to excite the breast to a due performance of the natural actions it will always be advisable to let the child suck at an early period.

This practice is probably connected too with the subject of sore nipples, a state of disorder which almost universally occurs in persons of the higher classes of society. For, although it is probable that the faulty habits of life which incapacitate the majority of such women for suckling, form the principal cause of their being affected by soreness of the nipples, yet it may be expected, that this evil will be more certainly averted, if the breasts be drawn early than if they are permitted to be overloaded with milk before this nanatural mode of relief be afforded to them.

Thus then, as it appears to be probable that neither medicine nor artificial food should be given to a new-born infant, and also, as nature points out, that for some time after birth, the breast-milk is the only proper food for an infant, it only remains to discuss a few minor points of management before the great subject of weaning is taken up.

Mothers adopt different plans in suckling their children. Some allow them to take the breast very often, while others feed them more seldom and only at stated periods. Some let their infants sleep with them, and consequently, such children lie at the breast and suck almost incessantly during the night; while others lay their infants in a crib by the bedside and only allow them to take the breast occasionally.

An infant requires food very frequently during the day, and it is difficult to determine how often it may be allowed to suck; but as doing things in a certain order is not only the way to do them well, but to discover whether any fault exist in the adopted plan, and whether every possible good be derived from it, so it will be proper to suckle the infant at stated periods. For instance, if awake, it may be put to the breast once in every two hours during the day, and that the mother may be regular in so doing, she should always recollect the hour at which the child is suckled. By so doing, it will be soon discovered whether the child requires the breast oftener or seldomer than this, and the process will become precise as well as perfect, because it will be founded on experiment.

It is neither necessary nor proper to suckle an infant so frequently during the night. An infant will soon learn to sleep during the whole night if it be properly managed; and not only will much fatigue be thus saved to the mother, but a necessary period of rest will be given to the child's stomach ; and, what is better, the formation of many bad habits will be prevented. An instance is given in Vol. I. page 68, which points out the advantages of this method of treating infants. The child in question was taught to sleep invariably for intervals of four hours during the evening and night, from the period of its being a month old, and the same thing may be done in every other case.

Nay, it is not improbable that certain bad habits with regard to appetite and the taking of food in after-life may be continued from the erroneous plan of treating infants which is opposed to the one now recommended. It is very frequently seen that children and adults are capricious with regard to their appetite and to the food which they can take even when their health is apparently good. This capriciousness generally indeed arises from slight disorder in the digestive organs from mismanagement of the health, but it may be conceived that a bad habit of irregularity in these matters is transmitted from the child to the adult, and that capriciousness of appetite may be thus produced in some instances.

Another and a very great evil results from allowing an infant to sleep in the same bed with the nurse. The latter is not so decidedly awake to the calls of the child as she ought to be; hence the child is put to the breast when it cries, the nurse goes to sleep or is half asleep at the time, the child sucks itself also to sleep, and thus it lies all night sucking and wetting itself until in the morning it is in a deplorable state. A habit like this is bad enough in itself; but when it is considered that delicacy of bodily feelings may be taught to an infant as easily as any thing else, and that delicacy of mind is but as a corollary to proper corporeal habits, the evil will be sufficiently apparent. The infant that is mentioned above formed an excellent illustration of one part of this doctrine. As it advanced in age, it showed an extraordinary disposition to be cleanly and delicate both in its body and mind; whilst one of its sisters who was entrusted to the care of a nurse and was permitted to sleep with her grew up with very opposite habits. But, can it be wondered at that a child should become familiar with dirt who on waking every morning found her night-clothes wet from head to foot, and herself surrounded by the most noisome smell?

However frequently then, an infant may be suckled during the day, let him be fed for the evening, about seven o'clock, after having been previously washed and dressed in his night clothes. Let him then be put to bed and he will sleep till eleven o'clock. If he do not wake, he should be taken up and suckled, he being disturbed as little as possible. He should then be laid down again, and it will not be necessary to take him up again until he wakes of his own accord. This will probably occur once before morning, but not oftener; and indeed if the infant wake oftener than this, he should be left to go to sleep again unnoticed, unless some obvious reason of cleanliness exist for his wakefulness; but even then he should be laid down again and made to go to sleep without being suckled, otherwise he will expect it again on other similar occasions, and thus a bad habit will be easily taught.

It appears that infants swallow a certain quantity of air with their food; and therefore after sucking, they should be induced to throw it up, which they will generally do if they be rubbed or patted on the back immediately after sucking, especially too if a little pressure be made on the stomach, by making the child lean forwards on the nurse's hand. At all events this should be done after an infant has sucked in every instance.

It is hoped that many readers of these pages will be convinced by the facts and arguments which have been adduced above, that it is better to make an infant lie down constantly than be nursed on the lap; but those who may not be so convinced, will do well to adopt the practice of laying an infant down in all cases immediately after it have sucked and broken wind. An infant at such a moment is satisfied, and he will be more certainly induced, not only to allow his nurse to take a little rest, which the said nurse will be very glad to do, although she may quarrel with the idea of making her nursing-duties still more easy, but the child's digestion will go on more perfectly if he be at rest for a short time after feeding, than if he be moved about on the nurse's knee.

Infants require much sleep. A healthy and well-taught infant sleeps almost entirely during the first month of its existence; but even then, if care be not taken, it will acquire bad habits. A mother complained that her infant of ten days would not sleep at night and would not be laid down for a moment; and yet this child had been properly fed and it lay down contentedly enough on the day of its birth. The cause of the difficulty was pointed out, and the remedy suggested, but the child did not improve.

An infant of two months old, ought to sleep several times in the day, but still he should be kept awake long enough to oblige him to sleep at night. No child, as may be deduced from what is said above, should be allowed to be awake and troublesome during the night: for by proper management it may always be prevented.

It is remarkable moreover, how soon an infant may be taught to sleep at regular intervals during the day. Indeed many persons teach their children habits of this kind without being aware that they have done so; and then, all the credit is given to the child—"Oh, Sir!" one said, "it always goes to sleep at this hour; it is a very good child for that," which means "in that particular."

With regard to air and exercise, a mere infant, although it requires plenty of the one, much more than it is generally allowed to enjoy, is not so dependant for health on the other as is commonly supposed. Infants are almost always kept in the house too much. In London they are very seldom sent into the open air during the first month, even in summer. This is an injurious custom. A lady, who lived in the country, and who had reared eight or nine children, invariably sent them out on the day of their birth, the nurse being even directed to take them to a certain place, which was at least a mile and a half off. London ladies would not approve of this, and yet all these children lived and were healthy; although, of course, some of them were born in the winter. During the fine weather of summer all infants should be taken into the open air during the first week and on every day afterwards. Fresh air is the child's dearest cordial; and it has been before shewn, that, the unhealthiness of children in London is in a considerable degree produced by their being kept too much within doors.

It is not enough that an infant be taken out into the air for a few minutes in the day. His time in early infancy should be almost divided between sleeping and being taken out. Let ladies, who live in London, and who find such difficulty in getting their children dressed in their fine clothes and taken out once or twice a day, recollect what they have seen those do who live in the country. In fine weather little or no additional clothing is put on them, whilst at colder seasons, the necessary clothes are kept at hand and the children are ready to sally forth in a moment.

Again, exposure to the open air is the best anodyne for a cross infant. How uncommon it is to see a mere infant awake in the street; the fresh air composes him, it makes him feel comfortable, and he falls asleep as a matter of course. Even adults feel this charmed power of the external air. A nervous lady can find no more effectual remedy for her uncomfortable feelings than a long drive into the country; the studious man too feels how a walk in the fresh air clears his intellects and drives away an incipient headache.

Exercise is not essential to the welfare of infants. During the first one or two months they should merely be carried from place to place in the horizontal position, and be neither shaken nor allowed to be upright. Even as the infant increases in age, it is not proper to toss him about too much. A mother reported a few days ago, that her infant's illness, a bowel complaint of some danger, immediately followed a fright, which it received from being suddenly tossed up in the air as nurses usually do. This child is nearly three months old, and the mother stated, that it had always been afraid of falling, so that she had not exercised it as violently as she had done her other children ; but, that a friend took the infant, and unwarily threw it up twice as is described above : it instantly changed colour, it became very pale and immediately afterwards its complaint began.

Under all circumstances, perhaps, the best exercise which an infant can take is that which nature dictates when the child is allowed to lie on the ground or on a mattress with as few clothes on as possible.

The impropriety of allowing an infant to be for many minutes together in the upright position has been alluded to. It was there stated that the bones of an infant, and especially the bones of the back, are not calculated to bear a considerable weight ; and it will be recollected that the back of an infant always bends when he is placed upright, and his head falls down on his chest or back just as the child is leaned forwards or in the opposite direction. The head is the heaviest part of the body, and it has not the power of keeping itself erect independant of the action of muscles. Hence the head falls down when fainting or death takes place, or the person sleeps. Muscles are fixed to bones, and those which support the head are principally attached to the back-bone ; and as the back-bone during infancy is almost entirely formed of cartilage or gristle as it is commonly called, it would be unable to afford the necessary support to those muscles when in action. It is perhaps for this reason that the muscles themselves have not yet acquired the power of acting with energy sufficient to support the head; as if to prevent the child from making such exertions as would tend to derange and injure the back-bone in its still soft state.

If a child be allowed to take exercise in its own way, it will not attempt to raise its head until the parts have acquired strength enough to support the necessary exertion, but after that time he will turn himself over on his carpet, and gradually learn how to raise himself into the upright position.

In reference to this point of the nursing of infants, which was discussed so fully in our last number, a medical friend of great observation has suggested a very important argument in favour of the plan which is there recommended. He says, in allusion to the prominent breast-bone and narrow chest which is so frequently seen in weakly children, that this species of deformity is produced by the erroneous mode of nursing which has been pointed out: and he refers for his proof to the fact, that the impressions of the nurse's thumbs may be found on the ribs of such infants, as may be seen by any one who will take up a child in the usual way of embracing his chest with the hands; for he says, that the thumbs will naturally fall into artificial hollows made, by previous pressure in the ribs on each side of the breast-bone. If this observation be verified, it will form an unanswerable argument for nursing infants differently.

The only artificial exercise which an infant can take with advantage, is that of being well rubbed. This species of exercise however is very advantageous, and it should be repeated at least two or three times in the day. Either the hand or a flesh-brush may be used, and it should be continued for several minutes at each time of rubbing. Infants like to have their skins rubbed before a fire, and all writers on the management of children have agreed in recommending sedulous and frequent friction as being highly conducive to the health of children.

The question of walking scarcely ever comes to be considered during the period of infancy proper. In the late months however, a lively infant likes to feel his legs on the ground as it is called, and no harm can arise from the practice of occasionally holding children by the shoulders with their feet touching the ground; but it is not necessary, if nursing be conducted on the principles pointed out in these essays, and indeed they should not, be permitted in any case to bear on their legs with the full weight of their body; for the bones even of the larger limbs are still very soft and not fit to bear the weight of a heavy child's body.

In concluding the consideration of the proper treatment of children during the period of infancy proper, it remains to say that the personal cleanliness of infants, as it concerns their evacuations, is attended to much less than it ought to be; or rather parents have not duly considered how their children may be kept cleaner and more comfortable than under the present mode of management. Some nurses have indeed found out, that, by holding out a very young child, it may be taught to pass its evacuations periodically, but the generality of persons do not attempt to regulate the actions of infants in that particular, although they are, probably, as much under controul as any other of the infant's habits. Dr. Underwood mentions one lady who held her children over a pan from the time they were a month old, and at four months old they used it with great regularity. If proper attention be paid, an infant may easily be taught to do more than this. Most infants wet themselves very frequently; but still it will be found, that this is done at tolerably regular intervals: and therefore, if these probable intervals are ascertained by observation, it will be easy to anticipate the period, and then, if care be taken to hold the child in the necessary position, until he does what is required, and then to remove him immediately in all cases, he will soon learn to connect his being held out with his performing the action in question. When this point is gained, a little more perseverance will make the child feel that the two circumstances are not to be separated; and therefore he will not only wait until he is held out on the one hand, but he will, on the other, perform his part whenever his attendants perform theirs by holding him out.

There is nothing difficult either in the conception or the performance of this. Infants very soon learn that they are going to suck when they are placed in a certain position; and why should they not be as easily taught to connect other things with certain positions as that? The advantages of creating such a habit in infants would be very great. As it is, infants are always wet; but in that case, they would not only be dry and comfortable, but the night also would be passed as comfortably as the day; for, an infant, so taught, would invariably wake and give notice by crying of his distress, and if he were then taken up and immediately laid down again, this process would not materially interfere with his night's rest, and by the time he was half a year old, the habit would be permanently and perfectly acquired.

It would require however great attention on the nurse's part to keep up so good an order of things, and it will be right to say here that much depends on an infant's being allowed to be surrounded by wet clothes for as short a time as possible. His napkins therefore should be changed directly after they become wet, and the skin should be washed by means of warm water and afterwards be made perfectly dry.

A bad practice prevails of putting a second napkin of flannel over the first, on the pretext of keeping the fluid from running through to the child's dress. This flannel napkin is called a pilch; but although it may have the above good effect in some cases, yet it is to be feared that it is often used as a means of preventing the necessity for changing the napkin oftener then is absolutely required: that, is of concealing that the child is wet, and therefore letting the nurse's trouble be spared at the expense of leaving the child with a wet cloth on. At all events, the second napkin affords so excellent an excuse for committing this fault, that, as all temptations to do wrong should be avoided, it will be better for mothers not to permit their nurses to use it.

ART. 3. *On Cutaneous eruptions as a sign of ill health in old persons.*

In what a countless variety of shapes does irritation show itself in the human constitution! We wear out and die long before the natural term of human life, and generation follows generation to the grave, without its once occuring to one of us that we are going before our time. It is, as we have often said before, disease that destroys us and not time. An old man here and there, certainly, appears to die fairly worn out, without showing the appearance of disease in any particular part; but such examples are but the exceptions to a rule which, is in other respects universal.

The remarkable part of the business however is, that these fatal diseases never come on at once; they take years in destroying life; and yet we totally disregard the warnings which they offer to us. Mrs. Thrale's tale of the three warnings is more true than even she herself believed it to be. Lameness does not come on, without having its cause in the chronic irritations of which we have spoken. Blindness in the same way, is almost always ushered in by an overfulness of the blood-vessels of the brain; and deafness, in like manner.

This morning we were consulted by an old person who had suffered considerable inconvenience from patches of scorbutic eruptions, as they are called, on different parts of his body. He wished for some external application to cure them. When his health was enquired into, he steadily maintained that it was in a perfect state. His tongue was furred, but that was natural to him; he was always heavy and sleepy after dinner, but that was proper at his age; his head often ached and was dizzy, but that was nothing; and in fact this gentleman believed he was quite well, because he could follow his accustomed pursuits as well as other persons of his own age; or he attributed the symptoms of disease which he felt to the natural decay of his bodily powers.

The eruption however was another matter, and he requested advice respecting that, firstly, because it was inconvenient to him; and secondly, because it formed rather an uncommon symptom of the deranged health from which it sprung. Nevertheless, it was as much produced by the errors of diet, &c. which made him ill, as were the more dangerous, but less observed signs of ill-health which were present in his constitution.

It will be fortunate, if this gentleman attends to the advice which was given to him. He is now obliged to be cupped occasionally, and he often feels it necessary to take a dose of physic; but if he looks at his case in its true light, he will abridge the quantity of his food; he will leave off wine and other fermented liquors; he will, in short, find out the quantity of food with which he will not be sleepy after dinner, and he will then discover that his tongue will become clean, that his giddiness will leave him, that his eruptions will cease to irritate him and will at last disappear, and what is better, that his sensations will be agreeable and his life happy, because his body is in health.

ART. 4. *On the Origin, Prevention, and Treatment of Colds.*

IN one of our earliest numbers we attempted to show how the different kinds of colds are to be distinguished from each other, the trivial disease from that which is important, the cold which subsides in a few days from that which leads to dangerous and fatal complaints.

It was stated in that article that a cold is a fever, and that this fever varies in its symptoms and importance, according as the inflammation falls on one part or the other of the mucous membrane which lines the mouth, nose, throat, and organs of respiration: the complaint being called by different names, such as a sneezing cold, a sore throat, inflammation of the larynx, croup or inflammation of the bronchia, according to circumstances.

There are indeed many other forms of fever, which as they are produced by the application of cold to the surface of the body may be called colds, and many of them are so named. For instance, a person takes cold and is laid up by an attack of rheumatism; in another inflammation is produced; in a third inflammation of the bowels or brain; in short, since this taking cold forms one of the most common modes in which disease is produced, the kind of disease differs almost in every case, just as the weak part, or part predisposed to become disordered, differs so remarkably in every person.

Several other circumstances however concur in varying the type of diseases produced by cold. Amongst these, the difference in the state of the atmosphere which marks the season of the year stands pre-eminent. In spring when the weather is cold and dry, if a person take cold, he will probably be affected by pleurisy or inflammation of the other serous membranes as of the bowels; or he will be affected by rheumatic fever. As the hot weather advances, the head will bear a prominent part in the colds of the season; still further on in the summer, when the bowels have become irritable from the use of fruits and other circumstances, purgings will occur when a person takes cold. In the autumn, on the contrary, when the dampness of the weather exerts a peculiar influence on the skin, inflammation of the mucous membranes, or what are more especially called colds, are produced, because a remarkable sympathy or consent of action exists between the skin and these mucous membranes.

In the present paper then, as the season demands the discussion of such a subject, we shall explain, as far as it is possible, the mode in which a cold is produced, the kinds of constitution which particularly predispose persons to take cold, the best modes of securing such constitution from the effect of cold, and such general ideas of the treatment of colds when they exist as can be understood, so as to be acted on beneficially, by unprofessional persons.

There is a general consent of action between all parts of the body. It would indeed be remarkable if it were not so; for all the organs of the body are supplied with blood by the same arteries, the nerves give them the same powers of action, and they each derive their nourishment from the same organ, the stomach. The affections of one part of the body however exert a greater influence over the remaining organ than those of others do. Thus the stomach, from the universality and importance of its connexion with all parts of the body, produces the most extensive action on other organs when itself is affected by disease. After the stomach, the skin perhaps exerts the most extended influence over the constitution; and, hence it is, that if the actions of the skin be interfered with, so many other parts of the body sympathize with the change. The surface of the skin is so extended, and consequently, the quantity of blood which, by circulating through the capillary or smallest arteries which form a large portion of the whole structure of the skin, becomes exposed to the action of external agents is so great, that it is easy to explain how the connexion between the skin and the parts within becomes so close. For it is through the medium of the blood vessels that the greater part of these secondary effects are produced. If the stomach be disordered, the heart forms in a great degree the link which connects that disorder with sympathetic affections of other parts. In like manner, if the skin be disordered in its actions, it is by interfering with the proper state of the circulation that particular parts of the constitution become disordered thereby. Certainly, the nerves form a medium of connexion which is scarcely less important than the heart; but as the generality of affections of the nerves themselves are only known to the constitution through the medium of the blood-vessels, it is of more importance to attend to the operation of the latter organs than to the direct influence of the nerves.

It is, of course, known to every one that the blood is sent by the power of the heart and arteries to all parts of the body, and that the arteries are the tubes through which the blood passes. But it must also be understood that by the time the blood arrives at the skin, the arteries have become so small in size and so numerous, that the skin is apparently formed of little else than a tissue of blood-vessels and of nerves. These capillary arteries as they are called, are endowed with certain peculiar and extensive powers of action: they contract and dilate to a great extent when acted on in various ways. If cold be applied to the skin, for instance, these arteries will, when very irritable, contract so forcibly as to empty themselves of nearly all the blood which they contain; if certain passions of the mind exist the same thing takes place. On the contrary, if the action of these capillary arteries be excited, as by exercise or by other passions of the mind, dilatation takes place, the skin becomes red and swelled from the quantity of blood which it is thus made to contain, and the surface is at the same time rendered hot instead of cold, as occurs when the vessels of the skin are contracted. An excellent illustration of the mode in which the vessels of the skin dilate when particularly excited is afforded by the effect of the passion which causes blushing.

It can easily be conceived, that if the whole skin be rendered very cold so that the blood is forced out of the capillary vessels, the blood must be accumulated in the internal parts. If this accumulation take place equally throughout the system, as it probably does in ordinary cases when the body is not predisposed to disease, no evil ensues; the reaction of the heart dissipates the congestion, and the system is left uninjured. But if a predisposition to disease be present in the constitution, the accumulation takes place unequally, the predisposed organ becomes overwhelmed, the heart in its reaction is unable to equalize the circulation, and therefore as this part remains in a state of congestion, inflammation occurs and thus the cold is established.

Such is the evil which follows a general contraction of the capillary arteries from the application of cold to the skin of persons who are already predisposed to disease.

But the same effect is very frequently produced when the skin is only partially chilled as when a person sits in a draught or gets his feet wet. In these cases, from the consent of action which exists between the different parts of the skin, the whole surface sympathizes with the chilled part and becomes itself chilled.

Such is the most approved theory of the mode in which a cold is produced by an imprudent exposure of the skin to the influence of a medium colder than itself; but pathologists are by no means satisfied with the explanation on many accounts, especially as they are unable to understand the mode in which these effects are produced. It is however probable that when the skin is chilled, the first action of the cold is on the nerves of the skin, and that the disordered state of the blood-vessels is a secondary process, the nerves being the part which supplies the heart and arteries with their powers of action. Some proof of this may be drawn from the fact that the nerves of the skin are evidently affected by the application of cold to them. Every body knows that the fingers and other parts become torpid and inactive when cold: this must arise from the nerves being temporarily paralysed; and if their actions be impeded, it may be expected that the actions of the arteries and of the other parts which depend on the nervous energy for their power will be impeded also.

It has been shown in a preceding page, that the evil effects of taking cold are, cæteris paribus, likely to appear in different parts of the body at different times of the year; that is according as the atmosphere is in particular states as refering to its coldness, heat, moistness, and dryness. This tendency to fall on particular parts is modified by the peculiarity of each person's constitution, as to its predisposition to become disordered, and by each person's state of health at the time. Thus, though the atmosphere may be moist and cold, so that the generality of colds shall appear in the form of inflammation of some part of the respiratory mucous membrane, particular persons may be so predisposed to rheumatism from the nerves of certain parts being the weak organ, that rheumatism may be produced instead of a common cold; or others may have the disease appear in the form of a bilious complaint, or of disordered bowels, if the digestive organs or the bowels be deranged in their actions at the time of taking cold. Generally speaking, however, in such seasons as the present, colds will appear as affections of the mucous membrane of the respiratory organs.

These mucous membranes are in a peculiar manner connected in their actions with the skin. They are, as it were, a continuation of the skin; for they join with it or arise from it at all their terminations. Many of their peculiarities of action are similar to those of the skin; and hence these membranes sympathize with the skin more forcibly than any other part of the body does. It is on this account, that is, because colds so often appear in the form of inflammation of the respiratory mucous membrane, that such inflammations have especially been called colds; but at the end of autumn and the beginning of winter, when the air is cold and damp, the connexion between the skin and the mucous membranes is called more decidedly into action, because as the effect of a cold and moist atmosphere on the skin is peculiarly noxious to the body, the sympathies between the skin and other parts are more decidedly implicated in the consequent effect.

It requires that the nerves and arteries of the skin should be in high health, to sustain with impunity a cold and damp air; or rather perhaps, the system should be thus strong and healthy. The reason for this is, that as much of the energy of the constitution seems to depend on its being in a highly electrical state, and as a cold and moist atmosphere robs surrounding objects of their electric fluid and conveys it away to the earth, the body is languid and the sensations are disagreeable in such weather. It seems as if the constitution were robbed of its energies, as may be understood by comparing the languor of the bodily powers in November, with their excited state in the dry weather of a hard frost. (See a preceding page of this Number.)

This account of the reason why colds are so prevalent in autumn, leads naturally to a description of what constitutions are the most liable to take cold; for it will be now apparent, that a languid circulation and weak bodily powers, must be less capable of braving the depressing qualities of a November atmosphere, than powers of a different kind.

Delicate females then, and those men, who from not having braced the vessels of their skin by a sufficient exposure to the air, or who from other causes have fallen into an ailing state, form the principal part of such as are liable to take cold. On the contrary, few persons take cold whose health is perfect, or who, suffering from ill-health, have accustomed themselves much to the fresh air. Hence men who live in a state of nature seldom take cold; neither do such as from choice or from necessity live much in the open air. Sportsmen, agriculturists, out-of-door artizans, and medical men who practice in the country, therefore suffer little from colds, let their general health be what it may. In like manner females who live much in the air are equally exempt. Nay, such persons not only brave the inclemencies of the seasons with impunity, but they even neglect to change their dress when it is wet, and still they pass without injury.

How different this is from what happens to the sedentary inhabitant of the house! The skin by this seclusion becomes more susceptible of injurious impressions from a cold or a damp atmosphere; for its nerves are habituated to a lower pitch of energy, and consequently its vessels shrink before degrees of cold, which have no effect on such as have accustomed the surface of their bodies to bear exposure to the wind and rain.

This is the general rule; if the health be perfect, and the vessels in a state of sufficiently energetic action, the body will very seldom take cold. Indeed if either of these desiderata be present, the immunity will be tolerably perfect; for a vigorous circulation on the skin will enable an invalid to escape colds, whilst a state of high bodily health will prevent the vessels of the skin from entailing evil on the constitution, though they themselves have become, from seclusion, too susceptible. But indeed, it is very uncommon to see those, whose occupation is sedentary and carried on within doors, in perfect health: their health may be tolerably good, but if it either be compared with the health and energetic state of savage nations, or a close examination be made of such persons, it will be found, that they know not what it is to feel in perfect health. It is uncommon to find, for instance, one such individual with a clean tongue; and yet it is quite certain, that the health cannot be perfect whilst the tongue is foul: the derangement may be slight, but it nevertheless exists.

Children form no exception to the observations made above. If they be in health and are habitually exposed to the free air, they do not readily take cold: their powers indeed are not so capable of sustaining the long-continued application of cold or moisture, as those of adults are;

but they are not injured by the temporary exposures of the body which produce colds in predisposed persons.

Under particular circumstances, however, the least predisposed person may take cold. If the body, for instance, be weakened by great exertions of body or mind, or by the want of food, a temporary predisposition will be engendered, and the effect will be produced. So young people are more liable to take cold, after being exhausted by late hours and long-continued dancing in a hot room, than at other times; the strongest boy, if he exhaust his powers by continued exertion, and then, after allowing the excitement of his system to subside, he plunge into cold water, may cause even a fatal congestion of the blood within. It is in this way indeed that violent diseases are often produced; the body becomes irritable and susceptible of impressions from being exhausted, this forms a predisposition to disease, and if the exciting cause of any disease be applied, the mischief is done: whereas, if the system had not been thus previously lowered, the exciting cause would have been applied in vain.

The existence of certain complaints in the constitution makes a person more liable to take cold than when he is affected by other disorders. Those who are predisposed to rheumatism will bear exposure very imperfectly; partly perhaps because the part affected in rheumatism lies so near the surface of the body that it is almost immediately acted on by the exciting cause. Those however whose chests are weak, that is whose weak part is in the respiratory organs, or who are already affected by some chronic complaint of those organs, are much more susceptible of taking cold in the common acceptation than they would have been had their ailments resided in any other part. The reason of this is obvious; the sympathy which exists between the skin and the respiratory mucous membrane sufficiently explains it.

It is easy to deduce from the above observations the best modes of securing the constitution from the effects of cold and moisture when applied to the surface of the body. The strongest person will avoid exposing himself unnecessarily when fatigued, or depressed in body or mind; he will recruit his wasted powers by rest or by food, and then he may in general brave the storm as before. The weakest too will do likewise: but more is required of them; for, rest and food will not do for them what it will for stronger persons. Their constitutions are habitually exhausted, and it is not often easy to renovate their lost energies. But much may be done by attending to the state of the skin; much by invigorating its vessels; much by raising them to a higher degree of tone.

The radical cure for these states of increased susceptibility is to improve the general health; but as the mode of doing this must depend on the peculiarity of the existing form of deranged health, it is impossible to discuss it here, further than by saying, that a weakened state of the digestive organs generally forms a prominent part of such cases. The proper care however of the circulation on the skin may be taught to every one, and fortunately, it forms a considerable auxiliary in the treatment of chronic disorders of perhaps every kind.

The first important point in the care of the skin is cleanliness, and this is more worthy of being spoken of here, because the different modes of bathing are much less attended to in this climate than they ought to be; especially as the uncertainty and the coldness of the weather obliges us to keep the skin more covered than is consistent with perfect cleanliness under such circumstances. An oily secretion is constantly poured out by the extreme vessels of the skin, which becomes a harbour for dirt unless periodical ablution be practised; and in certain situations, as in the feet or in the folds of the joints, offensive to the smell as well as acrimonious to the skin itself. At all events, the proper actions of the skin must be interfered with if this secretion be allowed to accumulate improperly.

A more general use of the warm bath would remedy this inconvenience; and warm bathing forms the best preliminary step in inuring the skin to bear exposure to cold with impunity. A strong man may employ cold water at once; but by those who are delicate the warm bath must be used in the first instance, and then the temperature of the water may be gradually lowered until it is brought to the temperature of 60°, or in summer to the lowest point at which it can be procured.

Thus then, the body should be sponged every morning first with warm water, and then day by day with colder water and friction be used afterwards. By these means the skin will be made clean, and its vessels will be invigorated by the stimulus of the cold and of the friction. In winter, this ablution should be used in a warm room; and then even the most debilitated will receive benefit from it, if the temperature of the water be lowered gradually. The addition of the mineral acids or of salt to the water adds to the stimulating effect of the ablution; but plain water will do admirably well, if its use be properly persevered in.

The shower bath performs this operation with great convenience, but the same thing may be done by sponging the body and pouring water over it when upright in a tub. The regular cold bath is not applicable to those persons whose health is delicate, and especially when the digestive organs are much obstructed; but, as the powers of the system and of the skin increase, a dip in cold water will be very efficacious, though not perhaps preferable to the shower bath at the same temperature.

Daily exercise carried to the point of producing perspiration is scarcely less effectual than the cold bath; the vessels of the skin are thus excited to an increased exertion of their powers, and the general strength of the body is improved by this increase of tone which the blood-vessels acquire, and by the promotion of perspiration; an action, which is very essential to the well-being of the body, but which is usually deficient when the vessels of the skin are debilitated.

The third great mode of invigorating the skin is to take much of that exercise in the open air. Man was not made for confinement within doors: his frame languishes unless it be exposed to the fresh air; and, on the contrary, a life spent in the open air is likely not only to be agreeable but long. At all events, by such means the body will be not only less likely to take cold when thus habitually exposed to the atmosphere, but there are very few persons who might not disregard the seasons and take no notice of either wet clothes or wet feet if they followed the plan which is recommended above. Of course no one would unnecessarily expose himself, nor neglect to change his dress when wet, especially if he be fatigued or otherwise exhausted; but it brings with it many pleasures to feel thus regardless of the warring elements, and, what is better, the discipline by which this good work is accomplished tends to strengthen the system generally, and forms no mean auxiliary in our attempts to cure those states of deranged health which so mainly predispose the body to take cold on every little exposure to the winds of Heaven.

The question still remains, how far those who are subject to complaints of the chest, or are actually labouring under them, may use these means of invigorating the skin and the constitution. The argument, in this case, turns principally on whether inflammation of the chest in any of its multifarious shapes be present or not? A person may be predisposed to such diseases and yet be free from the actual attack: if he be in this state, the bath, exercise and exposure to the air, will be as useful as in any other state of constitution, at least if due care be taken to begin their use in moderation, and to increase the cold by slow degrees. But if disease of the lungs be actually present, the case is very different. In the great majority of inflammations of the respiratory organs, these remedies would be highly improper, rest and warmth being essential to their cure; and therefore as a few states of sub-acute inflammation of particular parts of the lungs form the only exception to this rule, no one, but an experienced medical man can decide such a question, and not even he, unless he see the particular case.

At the termination however of inflammation of the lungs, that is where the disease is subdued and the constitution is only left in a weakened state, these modes of avoiding colds constitute the best means of bracing the weakened pulmonary organs and of rendering them less susceptible of future attacks of inflammation. They are indeed eminently applicable. A young lady was pronounced to be in a consumption: at all events, the best hope that was given only amounted to this, that even if the acute stage of the disease were passed over, it would be necessary to confine her to the house during the approaching winter, and to deprive her of the usual comforts of life. The inflammation was subdued, a warm shower bath (94°) was recommended to be used daily, the heat of the water being to be lowered by degrees until it was used at 60°, and in about a month, the patient's health was so perfectly established, that she was able to expose herself throughout the winter as usual (though the treatment did not commence till October), and an animal diet was prescribed in place of the vegetable food which only would have been allowed, if the constitution had not been thus invigorated. This young lady has continued well and quite free from all symptoms of consumption. In like manner, a lady of middle age, whose family were consumptive, and whose powers were impaired by frequent parturition, showed a disposition to consumption. An invigorating plan of this kind was recommended, and after some time, one part of it consisted in letting her sleep in a draught of air, her bed being placed between two open windows. This lady speedily recovered her health, bore more children, and lived for many years, until she died of a perfectly different complaint.

The last division of our subject is the treatment of colds. It will be seen, on referring to our former article on Colds, Vol. 1, p. 9, that as colds vary so much in importance and in form, the treatment of them must be equally various. An inflammation of the bronchia will require other remedies than those which are necessary for a sneezing cold; few complaints being more difficult to treat well than the first, few less so than the second.

Nevertheless, though it is so easy to superintend the progress of a common cold, a patient should take means to be quite sure that his complaint is merely a common cold, and that he is not affected by a more severe disease. But as we believe this may be done by any one who attentively reads the article above alluded to, and compares his own symptoms with what is there written, no harm can arise from his acting on the knowledge he has gained, as long as the symptoms are moderate.

If a person then be affected by a simple sneezing cold, that is, with a feverish complaint characterized by an inflamed state of the membrane which lines the nose and of the eyes, by a tense feeling over the forehead, and a disposition to sneeze, but without sore throat, or cough, it will only be necessary to put in practice the common means of moderating feverish action, and the complaint will soon subside. An emetic, if the tongue be much furred, and afterwards a dose of calomel with James's powder, followed by a full dose of Epsom salts dissolved in Senna tea, these will form the chief part of our early treatment; and, every thing being equal, it will be better if the calomel be taken in the evening, and the black dose early the next morning. Along with these remedies, it is very essential to abstain from all kinds of stimulating food and drink. For the first day, it will be in all cases better to avoid solid food of every kind and in the smallest quantity; and the same may be said of the second or even third day, if the symptoms of the complaint, especially those of fever, do not subside. Afterwards dry toast and farinaceous aliment, such as arrow root or sago, with dry toast may be taken; in the next degree, puddings which contain milk and eggs, as batter, bread or rice puddings; in the fourth, broth; and at last, when the fever has subsided and the tongue is clean, meat.

It is always proper to follow this order in giving food during a fever. In the earliest stages nourishing food of every kind is improper—the ancients kept their patients for the first two or three days of fever on cold water alone; and the progress from abstinence like this to the more solid diet of animal food should be very gradual; for relapses in fever are exceedingly common, and they almost invariably arise from one of two causes, exposure to cold, and a too early indulgence in food. The order then is, first, mere fluid, then fluid with farinaceous matter in it, then farinaceous puddings and some kinds of vegetables, then broth, and lastly, meat.

The third indication of cure is to regulate the temperature of the body. In the early part of a cold the skin is generally hot, at least after the first chilliness has gone off, and the nose is much inflamed. In this state, a close and hot room should be avoided, for it will always be attended by an increase of the stuffed feel of the head. On the contrary, a cold atmosphere is equally improper. Moderate warmth in a well ventilated apartment is the best; and on the whole, except in very slight cases, a continuance in bed is to be recommended: for, the proper action of the skin can be thus more certainly kept up, and the danger of receiving an accession of fever from the skin being chilled is avoided.

Before going to bed, and especially during the cold fit, bathing the feet in very hot water and for a considerable time is very advantageous, or what is much better a warm bath; and, during the course of the disorder, if the feet become cold, a repetition of this ablution, or sedulously fomenting the feet and legs with flannel wrung out of hot water, will be very agreeable, as well as useful.

Much relief too will often be obtained by holding the head over the steam of hot water, or by laying flannels wrung out of warm water on the face and forehead. Fomentations like these sooth the distended and inflamed vessels, and thus give much relief.

On the first day the salts and senna should be repeated until the bowels are fully unloaded. On the second evening the calomel and James's powder may be again given, and the black dose repeated in the morning. After this it will in general be unnecessary to do more than keep the bowels open by smaller quantities of the salts and senna;

but the strength of these purgatives must be regulated in all cases by the state of the fever.

These remedies, where bleeding is not required, form the efficient part of the treatment as far as medicine is concerned; but it is useful to give during the day saline draughts with antimonial wine in them, or James's powder when the skin is hot and the thirst great.

Under the above treatment, a cold ought to be relieved on the second day, and have gradually subsided by the fourth or fifth. If the fever continue after this time, it is clear that a more important cause of irritation exists to keep up the complaint. A medical man only can judge of this.

The treatment of common sore throats is similar to that pointed out for a sneezing cold. Gargles indeed may be used in addition; but gargles are not of much use. Few persons can use a gargle so that the fluid shall touch the inflamed part, and perhaps in most cases more good is done by fomenting the inside of the throat, by drawing in the steam of hot water, than by gargles, however skilfully used.

ART. 4. *On the New Purgative, the Croton Oil.*

THE most remarkable addition which has been lately made to our theraputical remedies is the oil of the seeds of an Indian plant, the Croton Tiglium. Mr. Flemming says, in the Medico-Chirurgical Review, No. 6, for September 1821, that it is an old remedy; and quotations in proof are given from Rumphius and from Dr. Fleming, who wrote in the eleventh volume of the Asiatic Researches a valuable paper on the Indian medicinal plants and drugs. The oil is extracted from the seeds, which were formerly known in Europe under the name of Grana Tigliæ and Grana Molucca. A single drop purges most violently; so that even one of the seeds is a sufficient dose. It is currently reported, that a London medical gentleman, whilst entertaining a party of medical friends, tasted a drop of the oil which he exhibited for inspection, and he was obliged to leave his company, as the medicine affected him not less than 70 times.

A drug like this is not to be employed rashly; but cases occasionally present themselves in which such a remedy is very desirable. So Dr. Uwins in his report of diseases published in the Monthly Magazine for August, says—

> "Four instances have occured within the last fortnight, in which the Croton-oil has proved of essential service. The first was the case of a boy who had taken poison, in whom it became necessary speedily to act on his bowels, and *half a drop* of this singular medicine almost immediately effected the purpose, after other cathartics had been administered in vain. The second case was one of spasm of the kidneys, which soon yielded to the same dose of the drug in question. An old lady was, thirdly, cheated by a drop of this oil put on some bread, who obstinately refused every thing in the shape of medicine; and lastly, a little subject, almost suffocated under the deadly grasp of croup, has been restored to life by merely rubbing the tongue with the cork of a Croton-oil vial."

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ART. 1. *December.*

THE weather during the early part of December differs but little from that which characterizes the latter half of November. The same fogs, the same uncomfortable, dreary days, the same whistling winds, and, alas, the same disordered sensations prevail. But as the thermometer marks a decrease in the atmospheric temperature, a nearer approach is thus made to the time when the kindly frost shall come to cheer men's minds, and make them throw off their heavy load of disagreeable feelings. For the same reason, and as if for an earnest of the weather which is most conducive to a proper enjoyment of Christmas gaieties, snatches of frosty weather occur more frequently than in November, and consequently the disorders of the month are modified in character.

These things were fully discussed in our account of last month, and therefore little more need be said of them here. Some variations, however, of course occur, and in the latter end of November and during the greater part of December of 1820 the eruptive diseases of children, such as the measles, scarlet-fever, chicken-pox and probably the small-pox were very frequent in and about London. Amongst these the measles particularly appeared in a very severe form.

Besides these complaints, diarrhœa and other disorders of the stomach and bowels were very prevalent.

With regard to the above-mentioned eruptive fevers, it was curious and interesting to observe how they all appeared and became epidemic, as it were, at the same time; as if some other cause besides contagion had operated in producing them.

Indeed numerous cases occurred, which only admitted of an unsatisfactory explanation on the old theory of contagion. The mere fact of either measles, scarlet-fever and chicken-pox appearing sporadically is very remarkable; appearing for instance where a child had scarcely left the house, and where no possible connexion with contagion could be divined, except through one of those casual rencontres in the street which are very unlikely to produce the disease. But when two children, and as happened in one case, three children break out with chicken-pox at the same time, where no mode of catching the disease suggested itself, except an accidental meeting with the contagion in the street, and where, as the father of the three children said, "It is by no means clear that the whole three were ever out on the same day or together, the person who gave them the disease," as he went on to say, "must have been a good shot to hit all three while flying past him." These are circumstances, which if they do not go the length of throwing discredit on the theory of contagion, at least tend to prove that atmospheric peculiarities or some other unascertained states of the phenomena of nature have much influence in giving to the constitution a susceptibility for receiving the diseases in question.

They prove also that there is something in common between these eruptive fevers; for otherwise the latter would not all thus prevail at the same moment.

It is natural perhaps to believe, that these fevers have something in common; and as late enquirers have shown the great connexion which exists between them and inflammations of the mucous membranes, we may perhaps explain not only their greater prevalence at this season by the tendency which exists for such inflammations to prevail in damp and cold weather, but also the curious connecting fact that the skin is affected in all of them.

The appearance of bowel-complaints at such a season offers also some difficulty, if we attempt to explain it.

Bowel-complaints put on their most aggravated symptoms during the heats of summer. They appear indeed in winter and in spring, when they are usually remarkable for showing more decided marks of inflammatory action; but these November and December cases were obviously different from either of the forms of disease alluded to above. Pain was seldom present, the complaint did not exhaust the patient, the motions were not particularly watery, in several instances the complaint continued for some days without even the slightest pain being complained of, and in some there was an evident deficiency of bile in the evacuations.

In one person, a pain existed between the shoulders, which was evidently connected with a disordered liver. This pain was present for four days before the purging began, but it almost immediately receded when that happened. In another, where the quantity of bilewas evidently deficient, a tendency to apoplexy showed itself during the progress of this disorder which required a full bleeding for its removal, even in such a subject. The gentleman was nearly eighty years of age.

From these circumstances it appeared as if the torpor of the liver, which formed a part of that general want of tone in the constitution which characterized these two months, the weather being more than usually wet and cold, had gradually given rise to an obstructed state of the bowels which relieved itself by the substitution of the above-mentioned disorder.

However this may be, the complaint in some cases, gradually ceased without the application of any remedy, the want of pain continuing to the end as we have stated; in others purgatives and opiates conjoined cured the complaint in a very short time, as they will do under ordinary circumstances; whilst in others, a continued attention to the state of the digestive organs was required, and the disorder in them was only removed by a careful and persevering treatment of the peculiar symptoms by which it was characterized.

The principal medical directions for December refer rather to the cautions which are requisite to avoid danger from engaging too freely in the feasting enjoyments of Christmas, than to any rules founded on the above observations.

Now, it must not be answered, " Christmas comes but once a year," for that will not save the life of one of the very many children who are sacrificed every year to the festivities of Christmas.

This may be startling, but it is too true. Many opportunities will hereafter occur for explaining the mode in which indiscretions of diet, aye, and those, when only once or twice indulged in, have terminated the lives of children by inducing very severe diseases ; but it will be enough to remark here, that in the medical city of Endinburgh, where, of course, there is or ought to be more observation relating to these matters than elsewhere, so many children are made ill and die of disorders contracted by eating too much at this season, that, the complaint is called the bun-fever, and accurate calculations have been made of the numbers who are annually cut off by this bun-fever.

It may be as well to add, that whilst a healthy child may only be made sick by indulging in too much plum-pudding or cake, an unhealthy child or one who is recovering from previous illness, may, very probably indeed, become an example of the fatal consequences of such indiscretions, and add one more to the list of those who might have been great and good men, but who thus fall a sacrifice to so unworthy an idol as improprieties in eating and drinking.

With this brief hint of the dangers which environ even this happy season, it remains only to wish our readers a merry Christmas and to hope that our observations may do so much good as to prevent the evils of the season from occurring in the families of those who honour us by perusing our pages.

OBSERVATIONS ON CHILDREN.

ESSAY THE TENTH.

ART. 2. *On Wetnurses, and the mode in which mothers may be taught to suckle their own children.*

THERE are still two subjects connected with the feeding of infants which require to be mentioned; namely, wetnurses, and the mode by which mothers may teach themselves how to suckle their own infants.

Wetnurses are unfortunately a necessary evil. Without them the children of the better classes of society would suffer very materially; and although many persons believe that society would ultimately be benefitted, if wetnurses were prohibited by law, yet they form one of the conveniences which money will command. Indeed, as long as women can be found who will sacrifice the health of their children for the sake of gain, it is not surprising that those who can afford it will thus purchase health for their own offspring.

Nevertheless, although the existence of wetnurses is so convenient to one part of the community, it should not be forgotten at what a high price the advantage is procured. It is probable that the majority of London wetnurses, at least of those who go out at an early period after lying-in, lose their own infants. It is certain however, that health if not life is lost to all of them; for, as proper food is so important to the welfare of infants, it must follow, that children who are not only deprived of that food, but are moreover committed to the care of persons in whom ignorance, cupidity, and want of affection for their little charges, stand in the place of a proper knowledge of the mode of rearing children and a desire to perform their engagements faithfully, must be materially injured by the sad change to which they are subjected. How common it is, to hear that the children of wetnurses have died soon after their mothers have deserted them! It indeed scarcely ever happens, that a month passes over, when a wetnurse takes a place, without her being summoned to the bedside of her sick infant.

But it is needless to say more on this subject: for it is too true that as long as there is money enough to bribe, there will always be found a sufficient number of unnatural or distressed mothers by whom the bribe will be accepted. There still remains however, one point of view, in which the subject should be placed, and it is this. It behoves those who thus bribe their fellow-creatures to become unnatural mothers, to mitigate the consequent evils as much as possible, and many ways of doing this lie open to us. The most obvious plan, and one indeed which may be easily carried into execution, is to institute an asylum for the children of wetnurses. Were such an institution in existence, not only might the lives of very many infants be saved, but the health of many more preserved; and, what is scarcely a minor advantage, a facility would be offered to the majority of wetnurses which they greatly require, namely, the power of providing for their infants at a moderate expense.

Wetnurses are supplied from more than one class of women. They consist partly of married women, but principally of those unfortunate persons whose chastity has fallen a sacrifice to the persevering arts of designing men. Wetnurses of this latter class are much to be pitied, and their situation is generally speaking a very hard one. Deserted, as they commonly are, by their seducers, destitute of the means of supporting themselves and their infants, and incapable of engaging in any employment on account of their time being fully occupied in attending to the infant, their situation becomes one of the most deplorable distress. By degrees they sell their clothes and all the little property which they may have accumulated; but as the necessity for fresh supplies still exists, there remains but one dreadful resource for many of them—the resource of prostitution—and many are the sacrifices which are thus offered up at the polluted altar of man's incontinence. Unfortunately too, this sad lot falls chiefly on those who deserve it the least. Many young women of excellent character, are induced to sin in an evil hour. The most poignant regret follows; but, as good feeling leads them to do their duty in their new situation, they attend faithfully to their little charges, and do not feel the deplorable situation in which they are placed, until inevitable distress approaches, and at last plunges them into the depth of misery.

A young woman offered herself as wetnurse the other day. She stated that her distress was extreme. She had been a lady's maid, and was respected by her employers; but on account of her misfortune, the means of supporting herself and her infant had failed. It was impossible for her to undertake any employment on account of the attention which her child required; she had therefore sold all her clothes, and was at last so distressed for even food, that she was willing to take the wetnurse's place for any thing or for nothing if her child only could be provided for. The misery of this poor creature's countenance and general appearance was a sufficient guarantee of the truth of her story, even if the earnest simplicity of her manner had not spoken sufficiently in her favour; and yet she was not hired—and why—because she was an unmarried woman. It was in vain to plead the circumstances of this young woman's case, in vain to point out how inevitably her wants must lead her to prostitution, in vain to show how entirely her fault had been washed out by the distress which it had brought upon her, the answer was, she was unmarried, and it was necessary to make an example of such persons and prevent them from polluting the more respectable servants of the family. Polluting indeed! as if the tale of woe which a wretched being like this would relate in the kitchen would not probably be instrumental in keeping others from a similar lot; as if the culprit herself had not received a lesson which could never be forgotten.

When it is known that a person wants a wetnurse, there is always a sufficient number of applicants, and, on the occasion above alluded to, there were those who offered a disgusting contrast to the forlorn object who is mentioned above. One impudent young woman whose infant was base born, when she heard that an unmarried woman was objected to, bounced out of the room with a defiance, that there were plenty who would be glad of such as her. It would be well if "such as her" were rejected and made to feel the fault which they have committed; but if those who require a wetnurse would seek out objects of compassion like the one first mentioned, they would indeed act the part of the good Samaritan, and they would not go unrewarded.

A young woman of this description was hired on the principle now stated. It was evident that she had drunk deep of the cup of affliction, and it was equally evident that her sorrows had not been useless to her. She had formerly lived in very respectable families, and she turned out an excellent servant, continuing to be valuable long after her duties as a wetnurse ceased.

From whatever rank of life a wetnurse is chosen, she should be young and healthy, and of good manners as well as good tempered. She should be young and healthy; for although we have no very accurate method of judging of human milk, it is reasonable to believe, that the milk of different females varies as much in quality as well as quantity as that of the different kinds and individuals of dairy animals does. Certain it is, that the milk of particular women agrees with children and affords them much nourishment whilst that of others does not. Part of this may depend on the peculiarity of the female herself; but, it is still probable that a young and healthy person is more likely to afford an abundance of nourishing food to her offspring than one whose constitution is impaired either by age or disordered health. It is equally necessary that a wetnurse should possess good manners and a good temper. We have attempted to show on several occasions how much influence proper early tuition has on infants, and it is evident that if a nurse be ill tempered, she will probably not instil good habits into the breast of her little charge. In the same way, as good manners are the offspring of a delicate and sensible state of mind, or at least that they are closely connected with a feeling for good taste, it may be concluded, that a nurse whose mind is alive to the feelings from which the amenities of life spring, will assist at least in bringing the minds of our children to their proper bearing.

It is in general proper to choose a wetnurse whose child's age is as near as possible to that of the child who is to be suckled. This is however more important when the child is young than when it is older. The milk of a female who has lately been brought to bed is more opening and richer in cream than it becomes afterwards; whilst, in the latter months, the proportion of coagulable matter or curd which it contains is said to be larger. Perhaps these differences are not important if the nurse be healthy. In several instances nurses have suckled two or more children in the same family in succession. In one case, at present in progress, the nurse's milk is about two years old, and the second child is now ten months old, fat and healthy, and without having been seriously indisposed since its birth. The nurse has plenty of excellent milk. In another case, the wetnurse was obliged to give up suckling a third child on account of her milk proving deficient.

Medical men are often consulted respecting the proper diet of wetnurses, not less on account of the intrinsic importance of the thing itself, than because it is a subject on which wetnurses and their mistresses very often disagree. It is a general opinion amongst almost all classes of women that suckling females should live well; and, of course, the lower orders of nurses are not disinclined to turn this feeling to account in the gratification of their appetites. Wetnurses therefore, in general, eat largely and frequently of rich food, and drink as largely of porter or other intoxicating liquor. Two meals of meat in the day, with from two to three pints of porter, besides their breakfast and tea form the general diet of regular wetnurses: and it is not remarkable that so large a quantity of food should often be hurtful to females who do not perform much bodily labour. The majority of wetnurses however bear this high feeding much better than the defective digestive powers of the higher classes would seem to authorize; but it is not uncommon to see wetnurses bloated and oppressed, and evidently suffering from excess of food. In a few rare instances too, this state of the nurse seems to interfere with the health of the child. An infant, the other day, was apparently cured of blotches on its skin by lowering the diet of her nurse; it being evident that the latter was indulging in too stimulating a diet, from the flushed countenance and general fullness which her appearance indicated.

The diet of a wetnurse should be nutritious and abundant; but it need not be stimulating. Many women suckle children admirably without porter forming part of their diet. A large proportion of fluid is necessary; but many nurses report that gruel increases the quantity of milk as much as porter. Either ale or porter once in the day cannot in general injure a suckling woman, and it may, in many cases, be advantageous; as where the nurse, although free from disease, is weak, and seems to require support. In short, if a nurse be active at the same time that she have the appearance of being in high health, she is in the best state for suckling an infant, and therefore as her diet is probably such as agrees with her it should be continued.

A few minor points remain respecting the diet of nurses. Acids are prejudicial, as they will generally gripe the children. Vegetables also do the same thing in some cases, especially undressed ones. But, with these exceptions, the whole of which refer to the tendency which food like that has to turn acid on the stomach, all kinds of plain food are proper for wetnurses. Many nurses indeed object to eat salted meat on account of its disagreeing with the child. But salted meat, in such proportion as it is generally dressed in the families of those of the middle rank cannot be hurtful; and therefore the objection is only one of the many ways, in which, those who have the care of children improve the good feelings of their employers as respects children, to their own advantage. A wetnurse is often more dainty than a fine lady; although it probably happened that a short time before she became a wetnurse she had gladly accepted the most homely food.

In the same way that wetnurses can live on the plain food which agrees with other people, they are not injured by engaging in the customary occupations of female servants. The mothers of the poor work as hard when suckling as at any other time and without injuring their children; so do the females of those nations amongst whom the chief household and agricultural labours fall on the women. Were children nursed in the way pointed out in a former page, wetnurses would have abundance of time for household occupation, and it would be advantageous for themselves to be so employed.

The generality of mothers are fearful of changing their wetnurse least it should injure the child; and wetnurses are not defficient in taking advantage of this circumstance. There is no reason for this fear; for although it is unpleasant to change a servant, and the child dislikes it for a short time, yet it is scarcely more important to change a wetnurse than to change a butcher or a dairyman.*

The difficulty which ladies living in London experience in suckling their children has been mentioned, and the probable cause pointed out on a former occasion. It would be greatly to the advantage of many mothers if this difficulty could be obviated; for it is an evil which occurs very generally in London, and brings with it much distress to many persons.

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* It may not be inapplicable to add the best methods of obtaining wetnurses and the salaries which they generally expect on being hired. For infants who are less than a month old, the lying-in hospitals are the best places at which to apply for a wetnurse; because as at those institutions, the patients are not kept in the house longer than three weeks after delivery, their milk must necessarily be young. The generality of wetnurses however apply to the principal London accoucheurs to have their names entered in the nurse book as it is called; and indeed the majority of general practitioners have frequent similar applications made to them by wetnurses. But a good way of providing a choice of wetnurses at little trouble is to put an advertisement in one of the newspapers, appointing them to come at a certain hour, about two days after, to a certain place. Good wetnurses may generally be procured too, and on moderate terms, at the parochial infirmaries.

It was formerly the custom to hire wetnurses by the quarter or year, paying them about twenty-five guineas if by the year, sixteen, if by the half-year, and ten, if by the quarter, with one or two guineas per year for tea and sugar, if not found for them in the house; but it is now more common to hire them by the week at the rate of ten or twelve shillings per week, with the same allowance for tea and sugar. In estimating the fairness of these terms, it should be recollected, that wetnurses are unlike other servants, inasmuch as they have a child to provide for, and that the general charge for dry-nursing such children is seven shillings per week.

It is believed that the London habits of life have much influence in producing the evil, and therefore in considering how it is to be prevented it will be necessary to analyse these habits, and discover how they may be modified. A deficient exposure of the body to the open air, a deficiency of exercise, an indulgence in late hours both at night and in the morning, and perhaps some habitual improprieties of diet, form the chief causes of ladies not being able to suckle their children. None of these causes act on females of the lower classes of society; and these persons almost invariably make good suckling nurses; they take much exercise in the open air, they rise and go to bed almost with the sun, they live but little in hot rooms, and their diet is not too stimulating for the labour which they are called on to perform.

At all events, these are important particulars in which the two classes of females differ from each

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At ten shillings, therefore, a wetnurse has only three shillings per week with which to provide herself and her child with clothes and other necessaries. If wetnurses be hired by the week, they can always be parted with at a week's warning, and this is often not an insignificant check on their disposition to encroach and to make themselves important.

other, and it behoves one of them to take the subject into serious consideration. It has been often doubted whether the great improvements which have been made of late years in the mode of building houses, in hanging carriages, &c. have tended to the ultimate advantage of the opulent classes. A warm house and an easy carriage may have saved the lives of many weakly persons; but it is questionable whether the robustness of the remaining population has not been diminished by the change. A warm and convenient house must influence those who can stay at home in not going into the open air as frequently as they ought to do. A close carriage must add to the evil; and, inasmuch as it is easy, it will be further hurtful by robbing females of the little exercise which they would otherwise be obliged to take.

In like manner, the lateness of London hours of visiting most materially interferes with the proper observance of such rules as lead to health. A well lighted room at midnight is but a sorry substitute for the first rays of the morning sun; the vigour which early rising bestows is sadly compensated by the languor which late hours bring with them.

Lastly, habits like these are not calculated to lead to healthy plans of diet. The appetite which is not stimulated by labour and exposure of the body to the atmosphere will be delicate and capricious. The limbs of the strongest person decline in size and power when they are not used. So, the digestive organs languish and refuse to perform their office beneficially when the necessity for exertion is withdrawn. Hunger will not be present if activity of the bodily actions does not call for a supply of nourishment. The stomach of sedentary persons is always delicate; it pines for want of stimulus: therefore as London women are essentially sedentary, their digestive organs suffer in the same way. A really healthy appetite is seldom present, the stomach therefore becomes squeamish; common, wholesome, and nutritious aliment is refused, and innutritious food is either taken, or what is more common, a false stimulus is given by the addition of various liquors or the hurtful incentives of high cookery. The natural consequence of habits like these is, that the body is insufficiently nourished, and therefore its powers fail.

Another mode in which evil arises from sedentary, in-door habits is, that the proper action of the skin is interfered with or is nearly destroyed. If the circulation of the blood be not kept up by exercise, the small arteries which terminate on the skin will not receive their accustomed supply of blood; and hence, whilst the healthy perspiration is suspended, the surface of the body becomes pale instead of being rendered agreeable to the eye by the glow of a fine complexion.

Women, to whom these observations apply, cannot avoid having delicate frames. Many of them indeed may appear beautiful in the common acceptation of the word, but they can but seldom possess that bodily energy which alone fits the body for engaging in considerable or continued exertion. The call then which is made on the constitution by a suckling infant is not likely to be answered by those whose powers are thus debilitated. Persons, thus brought up, have neither strength to supply the demand which is made on them, nor powers of digestion to allow of the necessary increase of diet being adopted.

What are the means of obviating this evil? It ought to be easy to prevent the same thing from occurring to those females who are growing up: for however difficult it may be to break through the trammels of fashion, there ought to be no difficulty in preventing them from being put on. If young women were educated more with a reference to health and less to personal accomplishments and delicacy of appearance, the number of inefficient mothers would be diminished. If early hours were enjoined, if less attention were paid to grace and more to health, if abundance of exercise were substituted for the sedentary employment of the schoolroom; and then, if the same healthful habits were continued after the introduction of such females to society, the votaries of fashion might lose a few supporters, but domestic enjoyments would be increased; wives would be happier and husbands less frequently made uncomfortable by the insufficient health of their partners. Were many indeed, to join in following this more rational plan, fashion itself would be obliged to change, and the hours of visiting would be altered for those of our wiser forefathers.

It is true that the present late hours are convenient for the nobles of the land and for such persons as are not from necessity engaged in professional occupations. Dinner at seven or eight o'clock will effectually keep the Park select at six, and opening the drawing-room at eleven, will assuredly tend to restrict such society to those whose time is their own. But this privilege is dearly purchased even by the highest classes; whilst the custom is much to be condemned, because it leads others in a somewhat lower walk of life to an imitation which adds the evil of inconvenience to the insufficient health which it generally entails.

Although it may be easy for the rising generation to be taught how they may more certainly preserve their health entire, and thus be enabled to suckle their children, yet it is more difficult for those who are mothers at present to change their habits as much as may be required Other difficulties too occur; it will not be in all cases sufficient to acquire new habits, for when once the bodily powers have settled to one standard, that standard can only be raised to a higher point by much care and persevering attention. Again, those who have been accustomed to hot rooms and late hours will find how difficult it is, and how many painful efforts it requires to bring the body to bear, much less to like, exposure to the open air, especially during the early hours of morning. Languor, and perhaps illness, may succeed to the first attempts at a change; the opposition of friends and of social institutions will subject the resolution to many trials, and obstacles will be met with at every turn; but as the stake to be played for is very valuable, if perseverance is to be crowned by so great an accession of individual as well as domestic happiness, if the consequent improved health is to bring with it more agreeable bodily feelings to the females themselves, and more unmixed comforts to their children and families, success ought to be ensured.

Dr. Franklin's mode then of saving candles, namely, by going to bed early and using the morning sun, engaging largely in active exercise, braving the summer sun and the winter wind, increasing the tone of the bloodvessels and nerves of the skin by the shower-bath and the excitement which labour brings with it—these form an outline of the proper treatment, but which each interested person must fill up for herself if she intend to profit by it.

The mode of managing the shower bath is

however not immaterial. The shock of a large stream of cold water on an unprepared body is not to be recommended. The water should be used warm at first, and the temperature be gradually lowered until it reach 60°. of Fahrenheit's, at which point it should remain. The shower bath used in this way every morning on rising from bed, with sedulous friction of the body afterwards by means of coarse towels or the flesh-brush, forms an excellent mode of increasing the circulation of the skin, and thus indirectly improving the general health; for, as has been shown in another place, the health of the body is mainly dependant on the functions of the skin being properly performed.

ART. 3. *On the deleterious effects of opium on young children.*

IT is generally understood that opium is deleterious to young children; but it is not so universally known, as it ought to be, that exceedingly small quantities of opium, much smaller than would readily be believed, have sometimes destroyed the lives of children, and have often put them in great hazard.

One grain and a half of Dover's powder, which contains scarcely the sixth of a grain of opium, frightened the mother of a child exceedingly, by producing a continued sleep in the child of nearly two days. In another case, where a grain only of Dover's powder was given, with half a grain of calomel, to stop a bowel-complaint under which the child's strength was rapidly sinking, although it evidently saved its life, yet the profound sleep which it occasioned, and the deadly paleness, which appeared in the child's countenance induced considerable apprehension that the remedy would have done what it prevented the disease from accomplishing.

The first of these children was a stout but very small infant of eight months old, the other was a weakly baby of little more than three weeks old.

It may be said that in both these cases a large quantity of opium was given considering the age of the children; but there are instances on record where life has been lost in fine healthy infants from the exhibition of a single tea-spoon full of syrup of poppies. In the followingcase, how ever, the deleterious effect of a much smaller quantity of opium than that is very apparent.

A lady had been accustomed to give her infants, when they were cross, a mixture, each tea-spoonful of which contained one sixth of a drop of laudanum combined with rhubarb. At the birth of one of her children, she purchased a fresh bottle of medicine, and at different times gave more than an ounce of it before the child was six weeks old. At this time, in consequence of improper feeding, the child's bowels became much deranged; its flesh was wasted and its countenance was far less healthy than before. Under these circumstances, a tea-spoonful was given to the child early in the morning; it was repeated at night, and again the next morning. A short time after this, although the child had taken no more, in the three doses, than half a drop of laudanum, and that distributed over more than twenty-four hours, it sunk into the deepest sleep, so that it hardly seemed to breathe at all; the appearance of its countenance was a mixture of yellow and a dark coloured paleness, and the medical attendant as well as its parents was much alarmed, especially as the quantity of laudanum appeared to be by no means sufficient to produce so great an effect, and therefore it seemed probable that some other urgent cause of evil was acting on the child's constitution.

The symptoms gradually subsided, and as the mother had by this time learned that quieting the child's uncomfortable sensations by opium, was a bad substitute for giving it the food which nature intended it to have, she procured a wetnurse for her infant, and it thus soon recovered its pristine health and spirits.

This case is particularly instructive; not only because it shows how small a quantity of opium may endanger the life of a child, but because it explains how these small quantities will produce so great an effect at one time and not at another. Whilst the child was in stronger health it repeatedly took the same medicine without inconvenience, but immediately that its health and strength became impaired to a certain point, the medicine took effect and it thus narrowly escaped death.

Even medical men may receive much instruction by this lesson; but, it should not fail to teach mothers that they should on no account give opium to their children, except under the direction of those who are alone able to judge of the state of the constitution in which it may or may not be given with safety to a child.

ART. 4. *On the State, which is called health, and on the Mode in which Disease is produced.*

THE human body consists of various parts; parts which differ widely from each other in form, structure and action. The nature of the different bodily organs is so ordered, that whilst their individual form and structure are preserved in a perfect state, the actions of each and of all of them proceed so naturally and harmoniously, that they do not interfere with each. This consent of action throughout all the organs of the body constitutes the state of health.

The human body, then, is in a state of health when the actions of all its different parts are going on naturally and harmoniously; that is when the nervous system does not excite the heart and arteries in too small or too great a degree, when the heart and arteries, in their turn, do not press too little or too much on the different parts which they supply with the vital fluid, and when the structure of each of those parts is in such a perfect state of integrity, that the ordinary force of the circulation is that which excites it to a natural action.

Some of the actions of the animal body are so necessary to the continuance of life that they are constantly going on. The circulation of the blood is one of these; respiration is another; the proper actions of the brain and nervous system, or those parts of them which govern the motions of the other two, form a third. There are other animal powers which are only required to be occasionally called into action. The powers of the voluntary muscles are of this kind; so are most of the secretions, as of the bile, the saliva, &c.; so also are a great part, if not the whole, of the mental powers. The different actions too by which the body is reproduced, or its wear and tear provided for, fall into the same class; for, although, the actions of the digestive organs are absolutely necessary for the preservation of life, yet the process of digestion may be occasionally intermitted, although not for so long a time as the action of voluntary muscles may be suspended.

Here then are various bodily organs brought into view; some of them always in action, others alternately active and at rest; some, which are employed in wasting and dissipating the substance and strength of the body, others in renovating its lost energies; some in impelling the rest to their proper duties, and others in obeying the mandates of superior organs. One part of the wonders of the animal body consists in the harmony with which these varied and complicated actions are carried on, in that nice adaptation of means to ends which commands the fulfilment of such numberless duties, without any of the agents being pressed beyond its natural powers.

But this harmony of nature is even more wonderful still; for the powers of reproduction are so accurately balanced with those of waste, and so certainly will perfectly healthy powers of reproduction supply new and healthy animal matter, in place of those used portions of the body which are in a constant state of waste and removal, that it is scarcely unreasonable to suppose that if the bodily health were quite perfect and could be made to continue so, or in other words, if the whole series of bodily processes went on in one uninterrupted harmony of action, the life of man might be prolonged to an almost indefinite time. Machines of human construction only wear out from the effects of friction. If their different parts possessed a power of taking up or absorbing their own atoms when injured, and of replacing them by new and perfect atoms, of course the destructive effect of friction would be counteracted; for the machine would be regenerated as it decayed, and it would be prevented from growing old. The human body, however, appears to have this power of regeneration:—then why does it grow old, and decay and die? The reason appears to be this,—it is impossible to keep up, even for a short time, this harmonious consent of natural actions, on which perfect health depends. The human body is subject to the influence of too many external causes of excitement to allow of this enviable equilibrium being long preserved. The body is hourly liable to the operation of causes which depress or excite some of its powers too much. Errors of diet or of general management, habits and occupations, the irregular exercise of the mental powers and the more violent passions of the mind, by turns overwhelm or excite the body; the equilibrium of health is destroyed; the powers of reproduction act imperfectly; the reproduced material is imperfect; organs thus become deranged in structure; their actions are rendered habitually imperfect, and decay and utter incapacity of acting at all or, in short, death gradually follows.

If this general view of the subject be understood, it will be easy to comprehend, how a long perseverance in such habits of mind or body, as excite certain bodily organs to irregular action, may eventually render that organ more faulty in its structure than the other parts of the body may be. This part will then be weaker than the rest; and so general is the operation of this partially disorganizing power, that, perhaps, no individual exists in whom some latent weakness or weak part does not exist. For, as in the reproduction of the species, like produces like, and therefore a father who possesses a faulty organ will transmit the fault to his children, unless the more perfect state of the mother counteract the evil in that particular, it is found by medical men that almost every individual suffers from some hereditary or acquired local weakness, such as is now described.*

It is thus that disease enters into the human body. If every deviation from the state of health be a state of disease, then whenever the organs of the body or any parts of them are thrown into irregular actions disease is present. It would be improper, however, to call this first deviation from health disease. Disorder is a better term, and it is used as such both in popular and professional language. But as soon as the repetition of this irregularity of action shall have induced a change in the structure of any organ, then the term disorder is not sufficiently expressive; and although disease in the common acceptation of the word, is still too strong an expression, yet it is the only one which the English language offers as applicable to the purpose.

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* This statement will explain the well known fact that animals which are constantly bred from one stock degenerate ; for the local weaknesses are thus transmitted, almost with certainty, from parents to their offspring. Farmers therefore learn, that, the evils of breeding "in and in" are counteracted by crossing the breed as it is called. Hence too, it is inproper for relations to intermarry, &c.

By calling then this state of local derangement or weakness disease, it follows, that the first great head of "predisposing causes," or those states of the body which make it liable to be acted on by the exciting causes of disease, itself forms, in reality, a class of diseases. Indeed, with the exception of those diseases from which the body in a state of perfect health would occasionally suffer, when the only predisposing cause is that irregularity of action in some organ or organs which we have denominated disorder, all the predisposing causes of disease are in themselves diseases, although of a very mild character.

There is, on the whole, no harm in thus extending the limits of the term disease; for, as one of the greatest secrets of preventive medicine is to avoid the predisposing causes of diseases, it will add spurs to the resolution of those who wish to keep in health, if they find that the predisposing causes of disorders, are in reality actual diseases.

It will now be seen, that the existence of a predisposing cause is necessary before the body can be excited into a state of disease; for even that irregularity of action, which we have called disorder, would not be produced if the body had not been originally endowed with a predisposition to be acted on by certain causes in a certain way, much less could the more violent diseases be produced, if the body were not under the influence of the appropriate predisposing cause or causes. Indeed, in the majority of cases, the form of the disease is given by the peculiarity of one of the predisposing causes. Thus, if the body, on account of a previous deranged state of the health, or from hereditary structure, have acquired a local weakness of any particular part, as of the chest, and the person take cold, or in other words, be subjected to one of the exciting causes, his complaint will be one of the chest; if the predisposing weakness resided in the abdomen, the disease would be in the abdomen, or, if in any other part, in that part.

It is on this account, that persons are affected by cold in different ways, as is remarked in the article on the origin, &c. of colds in our last Number; and it is for the same reason that the other exciting causes of disease produce such different complaints in different individuals. Even the exciting causes of severe and dangerous fevers, as of typhus, are thus varied in their effects on the human constitution: all the persons thus affected will have typhus indeed, but it will be complicated in one with inflammation of the lungs, in another, with inflammation of the brain, and in a third, of some abdominal organ. This complication, arising from the peculiarity of the predisposing causes, forms indeed the important feature of the case: for in simple cases of fever, that is, where no organ is particularly affected, few lives are lost, whilst the local inflammations which generally accompany fevers, give at once an important appearance to the symptoms, and constitute the danger of the disease. These local inflammations are invariably produced by the peculiarity of the predisposing causes of the fever; and, hence it will now be evident, that a knowledge of the predisposing causes of disease is very important, not only in teaching the cure of diseases, but the preservation of health. On this account, an early opportunity will be taken of enumerating more distinctly the various causes which predispose the body to be affected by what are called the exciting causes of disease.

Our readers will not find it difficult to understand the nature of exciting causes of disease after reading these observations on the predisposing causes. They are the immediate cause of a disease being produced. Just as no disease can be excited in any part of the human body without that part being predisposed to be thus affected, so the body might be exceedingly predisposed to be affected by disease, but no complaint would be produced unless some circumstance occurred to call into action the latent disorder. Thus, a person's lungs are weak, and are therefore predisposed to disorder; but no complaint occurs until he imprudently exposes himself to cold—inflammation of the lungs then immediately takes place; for both the exciting and predisposing causes of the disorder are at once applied. Another individual has that local weakness which predisposes to gout; he eats a large meal of stimulating and indigestible food, and the gout immediately follows. Or, it is the summer season, and the internal lining of the stomach and bowels becomes irritable. This predisposing irritability of the part is further increased by slight but frequently-repeated errors of diet; the bowels are thus on the verge of becoming disordered, when a larger quantity of improper food is taken than is common, and a bowel complaint is the immediate consequence. In this last case, whilst two predisposing causes join in producing the requisite tendency to disorder, the exciting cause is merely an excess of one of the predisposing causes. Other exciting causes however might have been equally effectual; exercise after eating, any violent affection of the mind, as terror or distress, and the application of cold to the surface of the body, might either of them, form the exciting cause of the complaint.

It is quite clear then, that at least two causes are necessary for the production of every disease; but pathologists have set up a third kind of cause which they say is equally indispensible, the proximate cause.

The proximate cause of a disease is that particular state of the disordered part which causes the symptoms. It is therefore, in other words, the disease itself. Local weakness predisposes the lungs to consumption; cold excites the disease into action, and the altered state of the lungs consequent on this which produces the symptoms is called the proximate cause of the consumption. In fact, it is the disease itself; for the symptoms of consumption are not the disease; it is the altered structure of the lungs which constitutes the evil, and therefore it is a little paradoxical to make the very presence of an evil one of the causes of its being present. We may safely lay aside the consideration of the proximate cause of disease when taken in the light of a cause; but as it is evident that the essence of curing a complaint resides in a knowledge of the exact nature of that alteration of structure from which it arises, the study of this branch of pathology, improperly called "proximate cause," is very important.

By thus unravelling a disease as it were, and showing in what it consists, and by what it was caused, the mystery of physic is made to disappear. If the symptoms of a disease intimately acquainted us with the part of the body in which it is situated, with the exact nature of the derangement of structure which is present, and we were enabled to elucidate with clearness the causes which predisposed to this state, and those which called it into action, we should, in most cases find very little difficulty in curing the disease—for the art of the physician would be nearly attained. But such is the complicated nature of the bodily actions, that the symptoms of diseases are not sufficiently explanatory to our weak faculties, the exact alteration in structure, even in the commonest disorders is but little understood, and we are in general very much in the dark respecting the exciting and predisposing causes; therefore it is not wonderful that medicine is called a conjectural art. Mankind ought to be taught by it however, that since our knowledge of these essential attributes of diseases is so vague and incomplete, it is impossible for them to dive deep enough into the sea of medical science to become effective practitioners. But as the causes of disease are better understood than the nature of the produced disease is, and as the art of preventive medicine consists in avoiding the causes of disease, the latter forms the most legitimate object of popular medicine, the goal towards which nearly all the efforts of unprofessional persons ought to tend

Art. 5. *Review of Essays on Hypochondriasis and other Nervous Affections.* By John Reid, M. D. *Member of the Royal College of Physicians, London, and late Physician to the Finsbury Dispensary.* 2nd edi. 8vo. London, 1821.

Dr. Reid commences his work by showing how great an influence the mind exerts on the body; and hence, he infers the importance of studying the anatomy of the mind, as well as making ourselves acquainted with the structure and functions of the body.

The human mind is only unfolded by degrees and according to circumstances. Hence "the savage, the rustic, the mechanical drudge and the infant" are less affected by mental influences than more cultivated individuals in the higher classes of society. The mental pleasures and pains of such persons are of a lower order, and therefore less capable of affecting the body than those which now exhilirate and now destroy the bodies of more sensitive persons: and Dr. R. truly infers from this, that a false estimate is often made by men of cultivated minds of the pleasures and pains of life. Surrounded by dirt and apparent misery, the poor are often supposed to be really miserable, whilst a little more thought would show the impossibility of their missing pleasures which they have never felt, or of their repining on account of evils, which, from their being the natural attributes of lower life, are only evils to those who move in a higher sphere.

The greater prevalence of nervous disorders amongst highly educated persons arises from this difference in the mental excitations of the higher and lower classes of society; for nervous affections are principally produced by the reaction of the mind on a disordered and debilitated body, and it often happens, says Dr. R., that whilst a practitioner "is directing his purblind skill to remove or relieve some more obvious symptom, the worm of mental malady may be gnawing inwardly and undetected at the root of the constitution."

This deleterious action of the mind on the body is not under the controul of the will. "It is idle and absurd to command or to advise a person labouring under nervous depression to be cheerful and alert," and, "the practice of laughing at or scolding a patient of this class is equally cruel and ineffectual. No one was ever laughed or scolded out of hypochondriasis."

However true this may be, in the abstract, and in extreme cases, yet, as it is well known that men may acquire, and most of us possess the power of occasionally warding off, or at least, of putting a temporary stop to the symptoms of disease by a determined exertion of our bodily powers, so are the mental affections, of which we speak, in a considerable degree under the controul of volition. We have given in the present number an extraordinary instance of an individual possessing the power of, as it were, voluntarily dying, and an abundance of examples might be offered of mental disorders being suspended and cured by a great stimulus being voluntarily applied to the body by exertions of the intellectual faculties. Resolution can do much in such cases, and would do more if "the very essence of the disease did not often consist in a debility of the resolution," "an impotency of spirit, a palsy of the power of resistance."

It is this debility which makes it improper for us to be too strenuous in calling on hypochondriacs to exert themselves: madness is but "a deficiency in the faculty of self-controul," and therefore, although a spirit of resistance properly excited may and will do much even in curing insanity, the stimulus which is necessary to excite this spirit must be applied, at first, in very small doses; otherwise it will be deleterious instead of useful. The power of self-controul may be easily taught in early youth, but the "bundle of habits" which externally constitutes the human mind becomes larger and therefore less flexible as life advances; and although the mind changes year by year, and bends before the new circumstances to which it is subjected in a greater degree than is commonly supposed, yet the operation is very slowly performed, and if attempted with violence, would not only be ineffectual but dangerous.

The fear of dying is said to be a very common symptom of hypochondriasis. An hypochondriac will cling to life even in the last stage of the most painful existence. Why so do many who are not hypochondriacs: but we mention this, because diseases are often rendered fatal by the want of that tranquil cheerfulness of mind and resignation under affliction with which this fear of dying is incompatible. It was this "poisonous operation of fear" which caused Lord Littleton to expire "at the exact stroke of the clock which in a dream or vision, he had been forewarned would be the signal of his departure." It should be repeated again and again, let us teach our children to acquire the power of self-controul. If men possess this power, and are engaged in a "regular and active occupation," they will not have the fear of death before their eyes; and, what is better, they will not be hypochondriacs.

Again, disappointed pride is a very fertile cause of hypochondriasis. A young student was determined to become celebrated for great talents and attainments, and he became insane on finding that his hopes were not realized, Vanity is the ruling passion of maniacs of this class. Our student thought that he was the Farnese Hercules, and that he had written the Eneid, as well as painted one of Raphael's finest pictures. Thus it appears that egotism can do worse things than make a man ridiculous.

On the contrary, humility, when carried to excess, becomes a cause of similar diseases. A maniac thought he was a barley-corn, and he was therefore fearful of going out lest he should be picked up by the birds. How differently must these two varieties of the same disease be treated! how much will not support and encouragement do for the humble maniac, and how little for him whose overweaning vanity has already carried him so far above his proper sphere!

" One reason," says Dr. R. " why the proud are peculiarly liable to mental derangement is, that they are less able than others to bear up against the distresses of life. They are more severely galled by the yoke of adversity." They consider misfortune as an injury done to them— " when assaulted by calamity, pride erects its crest in indignation against heaven." The bravado of the stoics that " pain is no evil" is but another expression of inordinate pride. Pride like this may form a cloak for our weakness, but it is not an armour which will defend us from its consequences : affected magnanimity is not true courage.

It is difficult to cure a man of being proud; but if the benevolent affections be fostered during childhood, and those which are selfish be repressed, so that children may learn to know that they are but individnals of a class, and that the claims of those who compose that class are or ought to be equal, we need not fear that our offspring will lapse into hypochondriasism and insanity on account of inordinate pride.

A third cause of these disorders is remorse. Remorse is apt to be mistaken for repentance. The latter is or ought to be a regenerating principle; the former is an unproductive feeling and not a compensation for misconduct. If contrition for faults committed lead to exertion and to practical reformation it is well; but it is mere indolence to indulge in the feeling of repentance, whilst a still further want of energy tends to precipitate those of weak intellect into melancholy and derangement.

In this species of insanity, men of the most pure sensibility often think themselves the greatest sinners, and an hypochrondriacal humility, Dr. R. says, is not cured without great difficulty. A gloom which arises from they know not what, constantly surrounds such persons, and their minds are for ever under the influence of some melancholy or horrid idea, which ought to have no existence. Dr. Johnson said, it is very difficult to eradicate this feeling of guiltiness, because the dictates of fancy are mistaken for those of conscience. It is probable, however, that there is always some slight cause for the existence of these delusions. A perfectly pure mind could not know that such a thing as an evil conscience exists; but practically, this is a useless distinction, for which of us is perfectly pure? Moreover, it is true, that intellects of a high order are not liable to this species of hypochondriasism. It is the meek and lowly man, in whom nature has not planted that invigorating spirit which makes us bound above the evils of society, that derangement occurs from this cause; and hence arises the difficulty of curing such affections; for we cannot give energy to those who possess no power of receiving it—a cup can only be full. But, if even a weak intellect be properly educated, if it be carried steadily along the path of truth and rectitude of feeling, it will approach nearer to the goal of excellence than if by faulty tuition it be allowed to turn to the right and to the left in search of erroneous and hurtful principles of action. This species of insanity then, may be better prevented than cured.

The next cause of hypochondriasism which comes under review is solitude. Burton, as Dr. Reid remarks, concludes his great work on the anatomy of melancholy with these words, "Be not solitary, be not idle." Solitude is the parent of many evils. That mind must be not only well stored but very powerful which can bear to be constantly thrown on its own resources. The thoughts of the cleverest man are too contracted not to require being improved and polished by intercourse with the world. Almost the purest metal will rust, unless it be attended to. So it is that intellects of a common order sink into a debased state unless they be kept up to the mark by collision with society. "So it happens," Dr. R. says, "that the voice of the appetites and passions is heard more distinctly amidst the stillness of retirement." The solitary man of this class flies to the pleasures of the table to avoid the horrors of ennui.

Solitude is even injurious to the miserable. "Misery," says our author, "ought, in a more especial manner to shun that seclusion which it is too apt to seek." The hypochondriac delights in solitude, and he thereby fosters his disease.

If then a strong mind cannot bear the debilitating effects of retirement, it cannot be doubtful that solitude is destructive to one of weaker powers. If "the lamp of life burns to waste in the sepulchre of solitude," it is not surprising that hypochondriacism is fed and even goaded into insanity by being thus treated. Let the most animated man seclude himself for a time, and just as the light of the sun will be too glaring to his eyes, so will he, for a time, feel unable to look at society with a steady gaze. Even Sir Joshua Reynolds, after seclusion, thought that the men which he met were trees walking, &c.

Hence then, Dr. R. says, that an active benevolence is the "anti-septic" "which counteracts the putrescency of melancholy;" and hence intercourse with society, and the pursuit of some out-of-door employment, form the best mode of invigorating a weak and desponding intellect.

The evil effects of excessive study then come under review. Study to the mind is as labour to the body: it is the aliment on which the mind feeds, and by which its energy is increased. But not so, if it be excessive. The bodily powers sink under excess of exertion, and the intellect trembles and fails under the oppression of too great a load. The mind is carried out of its course by an unnatural bias. A load of undigested knowledge weighs down the powers, and thus becomes not only useless but highly injurious. Knowledge is worse than useless, unless it be assimilated and purified by passing through the strainers of public opinion. To be useful, it must be active: it must be gained in the study, but it only becomes refined and really useful to its possessor when society has stamped it as sterling coin. Then it is, and then only, that knowledge is power.

A little reading will do much if it suggest subjects for thought, and reasons for active employment. Under other circumstances, reading is only literary gluttony; the indulgence of which Dr. R. says, only "accumulates a mass of indigested matter which oppresses and in time destroys altogether the power of intellectual assimulation."

Variety of studies, but above all, an intercourse with nature, as she presents herself to our eyes in the heavens and on the earth, and a constant submittal of our acquisitions to the touchstone of the world's discussion, will prevent us from becoming hypochondriacs from excessive study.

Vicissitude follows as "a cause and characteristic symptom of intellectual malady." The effect of great vicissitudes of fortune in causing insanity is well known; but why do they do so? certainly because the minds of the majority of persons are not sufficiently rational and calm to bear up against the constant changes which characterise human affairs. A temperate regulation of all the feelings, an evenness and quietness of the temper, which can only be acquired by a constitutional belief in the necessity of submission to what cannot be avoided, these form the mode of preventing the vicissitudes of life from producing insanity.

In discussing the effect of *sleep* on the human body, Dr. R. likens the state of insanity to that of dreaming or of reverie; and certainly the resemblance holds good in some particulars. In sleep some of the faculties of the mind are suspended; so it is in insanity. In like manner, insanity is caused by the operation of external circumstances on the body; so dreaming is produced by corporeal irritation.

Although this speculation may appear to be a little like a dream, yet it is clear that the *want of sleep* not only aggravates the evils of the insane, but frequently forms one of the great agents in producing their disease. The calmness of our thoughts in the morning sufficiently accounts for this fact. We must refer to Dr. R.'s work for the best modes of producing sleep; but it may be remarked generally, that if due attention be paid in our education to the care of the mind, as well as of the body, if our days be occupied in innocent, although they may be anxious studies, sleep will fall on our eyelids at night; at least if we take care to join with our mental exertions bodily exercise carried to the point of fatigue, and temperance in the affairs of the table.

Intemperance is a common cause of insanity. It is intemperance which cuts short the thread of life in the majority of persons, and it is the same power which so often annihilates the mind before it reduces the body to its pristine nothingness. It is then a mistake to believe that hard-living, as it is called, produces a merry life as well as a short one. "Death is the last, but not the worst result of intemperance": not only does the mind frequently fail under the consequences of intemperance, but the latter days of an intemperate man are as years of suffering, and the grave therefore appears to the eyes of such persons a peaceful and desirable haven.

Men of vivacity and of acute feeling bear intemperance worse than other persons: their minds require no excessive stimulus. It would be out of place to enlarge here on the mode of breaking intemperate habits. The best cure is so to educate our children that they shall not acquire such habits.

Many miserable persons are in the habit of taking laudanum or opium in other forms, for the purpose of inebriation. Vinous liquors are very hurtful to the constitution, but opium is still more deleterious. The horrors which a drunkard from opium feels, when the stimulus of his dose has subsided, are dreadful in the extreme.

Dr. R. then speaks of *inebriation from prosperity* as it sometimes produces insanity. A sudden accession of fortune has often acted in destroying the reason.

It will be necessary to suspend the further consideration of this interesting publication until our next number.

ART. 6.—" Dr. Cheyne, in one of his medical treatises, narrates a case, the accuracy of which is established by an irrefragable combination of evidence, of a man who could die to all appearance, at any time that he chose, and after having lain for a considerable period as a corpse, was able as it should seem, by a voluntary struggle, to restore to himself the appearance and all the various functions of animation and intellect. It is to be inferred from the latter part of the story, that the unnatural and painful exertions by which this person assumed the semblance of decease, produced at length a really fatal result. Death would be no longer mocked with impunity. The counfeit corpse a few hours after its last revival, relapsed into a state, which was capable of no subsequent resuscitation. But the case is so interesting and remarkable as to deserve our giving it in all the detail with which Dr. Cheyne presents it to his readers.

" He could die or expire when he pleased ; and yet, by an effort, or somehow, he could come to life again. He insisted so much on our seeing the trial made, that we were at last forced to comply. We all three felt his pulse first, it was distinct, though small and thready ; and his heart had its usual beating. He composed himself on his back, and lay in a still posture for some time ; while I held his right hand, Dr. Baynard laid his hand on his heart, and Mr. Skrine held a clean looking-glass to his mouth. I found his pulse sink gradually, till at last I could not feel any by the most exact and nice touch. Dr. Baynard could not feel the least motion in his heart, nor Mr. Skrine perceive the least sort of breath on the bright mirror he held to his mouth. When each of us. by turns, examined his arm, heart, and breath, but could not by the nicest scrutiny, discover the least symptom of life in him. We reasoned a long time about this odd appearance as well as we could, and finding he still continued in that condition, we began to conclude, that he had carried the experiment too far, and at last we were satisfied that he was actually dead, and were just ready to leave him. By nine o'clock in the morning in autumn, as we were going away, we observed some motion about the body, and upon examination, found the motion of his pulse and heart gradually returning, he began to breathe gently and speak softly. We were all astonished to the last degree at the unexpected change, and after some further conversation with him and with ourselves, went away fully satisfied as to all the particulars of this fact, but not able to form any rational scheme how to account for it. He afterwards called for his attorney, added a codicil to his will, &c. and calmly and composedly died about five or six o'clock that evening."—*(Dr. Reid's Essays on Hypochondrasis, and other nervous affections. 2d Edition, p.* 12.)

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Art. I. *January.*

An entrance on the new year gives a sort of tacit earnest that we shall soon have spring again. The same thing is told us too by the gradual lengthening of the days ; and it is indeed very pleasant to find, towards the end of the month, that five o'clock strikes and still sufficient light remains to let us follow our accustomed avocations.

But there is still, even in January, a more congenial sign that spring is not far distant. If the month be not, as often happens, locked up in continued frost, but the weather is open, although we are chilled by the morning fogs, we are nevertheless occasionally surprised and cheered by the breaking out of the sun in the middle of the day, and by feeling that the open weather of January is a very different thing from the open weather of November and December. The one is heavy, wearisome, and depressing ; the other partakes of none of these bad qualities, at least not in any thing like the same degree. Invalids do not complain of it half so much, and they are a very good test of the heaviness of the atmosphere ; an excellent living barometer, which is sufficiently sensible to such differences of atmospherical influence as are here alluded to.

The diseases of January show too that a material change has taken place in the constitution of the air as Sydenham called it. They are more inflammatory. It is true they are generally of a bilious character, as they were in the two former months, but a disposition to inflammatory action marks the one, whilst in the other such complaints put on the character of slow nervous fevers as they were formerly called.

The weather in January 1820 was particularly open, and yet the change, above-described, had evidently taken place in the aspect of the diseases. Another fact too presented itself; the eruptive diseases of children, and with them probably for the same reason the bronchial complaints, which had prevailed so extensively during the preceding months, had now almost entirely disappeared.

These circumstances deserve some attention; for why should there be so great a difference? the temperature is nearly the same in the open weather of January as in that of November, and yet the effect is so different. One reason may be, that the air is certainly drier; partly because less rain has fallen, and that which came down at the equinox has sunk into the earth or run down into the sea, and partly perhaps, because the prevailing winds may be different. The frost and hard weather, which always precede these ameliorated January atmospheres, may change the constitution of the air as well as produce a difference in the human body by their bracing powers.

Be this as it may, inflammatory diseases are more to be expected in January than in the preceding months. Fevers for the same reason become apparently more severe, and, generally speaking, all acute diseases show more violence of character.

As a proof of this, it may be stated, especially also as it shows the close connection which exists between the typhoid fevers as they are called and bilious complaints, that, during the autumn, the number of cases admitted into the fever hospitals increased during the autumnal months ; but that the continued frost which occurred at the latter end of December and beginning of January nearly stopped them altogether : whilst on the occurrence of open weather again new cases presented themselves in rapid succession, all of them bearing a more aggravated character than marked those which occurred before the frost. They were in fact more inflammatory.

In January 1820 indeed, the complaints were almost all bilious : and this is true, although it was remarkable enough that affections of the bowels formed a considerable item in the list of diseases.

These bowel complaints were very interesting;

for they were altogether different from those which occur in August and September, and required a different mode of treatment; for whilst in the September cases a superabundance of bile was the apparent cause of the disorder, in these, the secretion of the bile was evidently deficient, and a decidedly inflammatory or congested state of the liver formed one of their most conspicuous features. A quick pulse and hot yellow skin, a jaundiced eye and great tenderness of the abdomen, required that the treatment should be active and depletory, rather than of that soothing description which cured the bowel complaints of the former period. The permanent relief also, which was obtained when a free flow of bile had in this way been induced, left no doubt of these affections of the bowels being only a singular variety of the many other hepatic or inflammatory diseases which marked the season, and differing from the former only in having the purging in addition to the other symptoms.

Well is it when medical men mark these endless varieties of character which diseases put on under different circumstances. Sydenham said long ago that he could never treat the diseases of any season successfully, until he had studied the peculiarity of aspect which had been imprinted on them by the state of the atmosphere in that season; and it is not likely that we shall be able to do what Sydenham could not accomplish.

It is easy to deduce from the above observations the necessary directions for, as far as is possible, preventing the occurrence of disease in January. When inflammatory diseases threaten, it is of course right to keep the actions of the constitution from being wound up to too high a pitch; but when the peculiar seat of those inflammations is more frequently in the liver than in other parts, and therefore, when a healthy state of the digestive organs is so much more important than under ordinary circumstances, it becomes necessary that we should join an especial attention to prevent an overloading of these organs, to our other precautions. Thus, whilst we watch jealously over feelings of disorder, and purge briskly, on the first symptoms of oppression or over-action in our constitutions, we should be particularly cautious so to regulate the diet, that no obstruction may take place in the stomach and upper part of the bowels: we should live more moderately, and occasionally make a banian day, if sleepiness after dinner or hot hands in the evening warn us that the main wheels of the human machine are getting out of order and clogged up.

OBSERVATIONS ON CHILDREN.

ESSAY THE ELEVENTH.

Art. 2. *The Teething of Infants.*

Teething is one of the most important operations which an infant performs. It is at the period of teething, that the constitution of the child is first tried; for if it be good, or rather, if, to a good constitution be joined proper management during the preceding months of the infant's life, the process of teething goes on without producing much inconvenience to the child; whereas, if the previous management have been defective, if improper food have been allowed, the moral treatment been bad, and exposure to the fresh air denied, so that the infant's health have been deranged, then teething becomes a process of danger. Disease and death hang over him in many shapes, anxiety and distress await those who surround him, and, even at the best, his life, during the year and a half of teething, is rendered miserable, and the attendant evils of bad temper and fostered passions are probably entailed on him for ever.

There are many interesting circumstances in the natural history of the teeth, or rather with respect to the mode in which the food is masticated or prepared for being digested in the stomach. The structure of the mouth and of the teeth varies in different animals according to the kind of food which they are destined to live on. Graminivorous animals, or those who live on herbs or vegetable food, possess teeth which cut, and are therefore called incisors, and molares, or teeth which are on the contrary flat at the top, and therefore calculated for grinding the food which passes between them. Also, besides the motions by which the mouth is opened and shut, a lateral or grinding motion is given to the jaws of graminivorous animals, without which the molares would be incapable of triturating or grinding the food. This grinding motion of the jaws is very essential to graminivorous animals; for it seems necessary that the food on which they live should be well masticated before it can be digested.

Other animals live on flesh, and are hence called carnivorous animals. The teeth of these animals vary from those of the class above described. Incisors and molares are still found, but a third kind of tooth is added, which is pointed, and evidently intended to enable the animal to seize on its prey and tear it in pieces. But although carnivorous animals possess this new kind of tooth, they lose the power of grinding the food; their jaws therefore do not possess the lateral motion which is mentioned above. The reason of this probably is, that the food of carnivorous animals does not require to be chewed.

These distinctive marks of carnivorous and graminivorous animals are universal; and therefore, as the human subject possesses both canine teeth and the grinding motion of the jaws, it is presumed, that his system is formed for being nourished both by animal and vegetable food.

Every one knows, that the human subject is furnished with two sets of teeth, which appear at different periods of life. The teeth of childhood are not those which are used at a more mature age. This shedding and renewal of the teeth does not prove that the two sets differ essentially from each other. Teeth, when once developed, do not grow as the limbs do; the teeth of childhood therefore would be too small for the adult, and those of manhood too large for the child.

The first set of teeth then is formed in the same way as those are which follow: they are equally perfect, but are smaller. For a similar reason, they are also less numerous; a child's mouth would not hold more than are allotted to it. The milk teeth are generally twenty in number; the adult set consists of from twenty-eight to thirty-two. The order in which these teeth are cut is in like manner determined by the varying size of the child's mouth. When the infant cuts his first four teeth in a perfect state, his molares and canine teeth are only in progress; they are scarcely formed. The developement of the teeth even of childhood requires nearly two years for its consummation; twelve or more years are passed over before all the adult teeth cut the gum, independent of the number of years during which the teeth are forming beneath the gum.

The teeth of neither set cut the gum until they are perfectly formed and have acquired their full growth: a considerable period therefore elapses, during which, they are concealed by the gum. This period is longer or shorter according to the size of the tooth; and it also occurs at different ages according to the tooth which is to be cut. Thus the pulpy rudiments of the incisors are to be discovered in the fœtus, five or six months before the birth of the child; whilst, when the incisors cut the gum in a perfect state, seven or eight months after birth, the last molaris still exists in a pulpy state within the gum.

The formation of the teeth goes on as follows. Five or six months before birth, four or five little pulpy substances may be perceived in corresponding depressions found in the upper edge of the embryo's jaw. These are the rudiments of the crowns of the incisor teeth. It is not until two or three months before birth, that these pulps begin to ossify or become bony. At this time also the first of them begins to advance, that is the fang begins to be formed, the crown being in this way forced up towards the gum. The grinders or molares may now also be seen in a pulpy state, and, soon afterwards, they also begin to ossify; so that, at the time of birth not only are all the twenty milk teeth partly formed and concealed beneath the gum, but the rudiments of one or two of the adult teeth or second set may be perceived also.

By the seventh or eighth month after birth, the incisors have risen so much that they press on the gum; absorption of the gum takes place, and the tooth appears in the opening. In some rare cases, the infant cuts his first two teeth at an earlier period; nay, it sometimes happens that a child is born with one or both of them above the gum. In other cases, the first teeth are not protruded until the child is a year old. In one case fourteen months passed over before this happened. About the seventh or eighth month is however the usual time.

In a great majority of cases, the middle incisor of each side of the lower jaw first appears. At a variable period after this, the two corresponding incisors of the upper jaw cut the gum. After these four teeth have appeared, there is generally a pause of some weeks before the other teeth shew signs of pressing on the gum. Indeed, all the teeth come in sets; it seeming, as if the growth of the teeth produces no symptoms of irritation until they begin to press on the gum, and that then the process goes on rapidly until its completion.

The next set commonly consists of the four remaining incisors, and they are generally cut before the child is a year old. It usually happens too, that the incisors of the lower jaw precede those of the upper as in the former case; but this is not an invariable rule. Moreover, in some cases, the first four grinders appear before all the incisors have cut the gum. Generally, however, the grinders remain quiet in the jaws until the incisors have ceased to produce irritation, and this is advantageous when it occurs; for, as will be shewn hereafter, cutting the teeth often produces great irritation, and even fatal diseases, especially in unhealthy children, or in those whose health has been deranged by faulty management. In such children, dentition must be much more hazardous when the irritation, produced by the protrusion of the four grinders, is added to that of the second incisors.

In most cases, the four first grinders have passed the gum by about the completion of the first year of the child's life; making twelve teeth in in all, and leaving eight more to complete the twenty milk teeth.

After the complete developement of these twelve teeth, it commonly happens, that a longer interval of ease takes place than occurred between the cutting of the previous sets. At length, however, the four eye teeth appear at about the same time, and lastly the four remaining grinders.

It seldom happens that the whole twenty teeth have cut the gum before the child is two years of age, and in many cases the process is not completed until some months after that time. But, it is commonly remarked, that in all the children of the same family, nearly the same periods will be observed in cutting the teeth. In one case, each child of four began to cut its teeth at the seventh month, and in three of them the process terminated when they were two years old; the fourth child apparently intending to follow a similar law. In this instance these periods scarcely varied a week in either of the children. Considerable variations occur however in the children of other families.

Such is the manner in which the first set of teeth, or the milk teeth, form and appear above the gum. This set, as every one knows, is temporary; it being exchanged, after the lapse of a few years, for a more numerous set of larger teeth, which are called the permanent teeth, from the circumstance of their constituting the set which is to supply the wants of the individual during the remainder of his life.

The adult teeth, as they are also called, are gradually formed within the jaw bones in the same way as occurs with regard to the temporary teeth. The body of each tooth first appears as a pulpy mass which gradually ossifies and becomes bone; whilst, as the body rises up towards the gum, the fang or fangs of the tooth are gradually formed, first of pulp and then of bone, until the tooth is completed and cuts the gum.

The pulps of some of these permanent teeth are even formed before the birth of the child. "The pulps of the first incisor, and of the first adult molaris," says Mr. Hunter, "begin to appear in a fœtus of seven or eight months, and five or six months after birth the ossification begins in them. Soon after birth, the pulps of the second incisor and cuspidatus begin to be formed, and about eight or nine months afterwards they begin to ossify. About the fifth or sixth year, the first bicuspis appears; about the sixth or seventh, the second bicuspis and the second molaris; and about the twelfth, the third molaris or dens sapientiæ."

These rudiments of the future teeth are always found low down in the jaw and at the inner side of the milk teeth, not exactly indeed answering in situation to the corresponding milk teeth, because as the former are necessarily larger than the latter, they are found to be gradually removed backwarder in the jaw. For this reason, the first bicuspis, which answers to the first milk-grinder, is not situated exactly behind that milk-grinder, but it is placed somewhat further back in the circle of the jaw.

None of these teeth cut the gum until the seventh year of the child's life, when the milk teeth begin to fall out, and their places are gradually occupied by the adult teeth. The interval between the seventh and the twelfth year of the child's life is taken up by the cutting of the incisors, the canine teeth, and the bicuspides or first imperfect grinders. "The first adult molaris comes to perfection and cuts the gum about the twelfth year of age, the second about the eighteenth, and the third, or dens sapientiæ (the wise-tooth), from the twentieth to the thirtieth; so that the incisores and cuspidati (canine teeth) require about six or seven years from their first appearance to come to perfection, the bicuspides about seven or eight, and the molares about twelve."

This gradual growth of the permanent teeth within the jaw would seem, at first sight, to allow of a very convenient mode of getting rid of the temporary or milk teeth: for as the former rise in the jaw, they appear to press on the fangs of the neighbouring milk teeth, and thus to cause absorption of those parts. Mr. Hunter says, however, it is erroneous to suppose that the absorption of the fang is occasioned by the pressure of the new teeth below. At all events, the fangs of the old milk teeth are gradually absorbed, and hence the bodies of the milk teeth fall out, their support in the jaw being lost as the fangs disappear. The grounds for Mr. Hunter's scepticism on this point are; 1st, that the pulps of the adult teeth are not formed in the sockets which contain the milk teeth; for each tooth, permanent as well as temporary, has its own socket:—and, 2dly, because in some rare cases, where the permanent bicuspides for instance have been deficient, the fang of the old milk grinder has been absorbed, and the body of the tooth has fallen out just as if the new tooth had been under it; the only difference being, that the process has not been so rapidly completed as under ordinary circumstances.

This last argument is a strong one, but it is not conclusive against the opinion that absorption of the milk fang is occasioned by the growing of the permanent tooth beneath it; for in many of those cases where it is necessary to draw the old milk teeth because the permanent teeth have cut the gum at an improper place, the fangs of the milk teeth which are thus drawn will be found to be not at all wasted; apparently, on account of their having escaped the pressure of the tooth which ought to have grown underneath.

But it is not intended to discuss here the peculiarities of the permanent teeth; hereafter they may advantageously come under consideration. At present, the milk teeth are the chief objects of attention, and the next point is the mode, in which cutting the milk teeth becomes dangerous to the child.

Some children cut their teeth without pain or inconvenience; whilst to others dentition is a dreadful cause of suffering and to many of death. As a rule of almost universal application, it may be stated, that if a child be healthy he will cut his teeth without difficulty, if unhealthy, not. This is consonant to reason; for it is scarcely to be expected, that the performance of any of the natural actions shall be hurtful to the body when in health, although it is easy to conceive that many of these actions may cause irritation, and consequently lead to disease if the body be predisposed to be thus disordered.

The teeth do not cut the gum in the literal acceptation of the word cut. It is a law of the human body that when any part is pressed on by an extraneous substance, it is absorbed, or, in other words, removed by the action of the vessels of the part. If a limb be bound by means of a roller, it will become less in size; if a pea be pressed firmly on the skin, it will gradually imbed itself in the part. In like manner, as the teeth grow, they press on the gum, absorption takes place, and the gum becomes thinner, until it at last gives way and the teeth appear in the opening.

It is remarked above, that this process is accomplished without pain or difficulty if the child be healthy; but that it is otherwise if the child be habitually disordered. One of the attributes of health is, that the body can allow itself to be pressed on to a certain degree, or be otherwise subjected to sources of irritation without irritation being produced. A healthy person would bear with impunity a pea to be imbedded in his flesh by the process alluded to above: if he were unhealthy, such an attempt would probably produce much inflammation. In like manner, if a child be healthy, it cuts its teeth without difficulty; if not, the pressure of the teeth on the gum becomes a cause of irritation, inflammation is produced, and the child suffers: or, where he is peculiarly irritable and predisposed to disease, more formidable complaints are brought on. In general, this disorder from teething is shown only by the child being cross, by his mouth being irritated and inflamed, and by the presence of some degree of fever; but, in many cases, still more severe disease shows itself, fevers are produced or are aggravated, and disorders of the nervous system, such as convulsions, and inflammation of the brain, or water in the head, occur.

Even healthy children are sometimes brought into danger by the irritation which cutting the teeth produces. All the children of one family took cold: the elder children suffered but little, but the youngest, who was cutting the four first grinders at the time, became suddenly much worse, the gums swelled and were much inflamed, symptoms of inflammation of the brain came on, the child had a long illness and was with difficulty saved from death. In this case, the accidental cold caused the child, who had been before perfectly healthy, to become irritable, and thus the teething became a source of dangerous disease; whereas, if the child had not thus taken cold, he would probably have cut the four grinders without injury being produced.

It may appear to be extraordinary that cutting the teeth should be such a formidable cause of irritation; but the bodies of children are particularly irritable; they are peculiarly susceptible of receiving impressions, and therefore a very slight cause of irritation will often be sufficient to produce the most dangerous diseases. This irritability goes off when the child grows older, as the subject under consideration proves; for, although cutting the first set of teeth is often so hazardous to children, cutting the second set is very seldom attended by material inconvenience.

The evil which arises to children from dentition is very various in its kind; indeed it comprises nearly all the diseases to which children are liable. The mode of production is very simple. The child is rendered more irritable, or, in other words, is predisposed to disease, by being in a state of disordered health; the process of dentition acts as a new source of irritation, and produces its effect, in some cases, by directly exciting the consequent disease, and in others by more violently predisposing the body to be acted on by the exciting causes of that disease.

Some children cut their teeth with a cough, others with a purging, and the latter, especially, is thought to be a favourable symptom of dentition. So indeed it is, inasmuch as it reduces the actions of the constitution, in the same way as any other evacuant would do. Still it is itself a disease excited by dentition in a child whose alimentary canal has become prone to disorder on account of some previous injudicious treatment, especially as respects his feeding. The cough, in like manner, is produced by dentition acting as an irritant in a child who is predisposed to inflammatory diseases of the chest.

Again, dentition predisposes the body to be acted on by some of the causes of fever. Most children are feverish whilst cutting their teeth; but dentition frequently aggravates common feverish complaints and makes them dangerous, as is shown by the case which is related above. The danger of fevers arises from the accidental inflammations, or other obstructions of particular parts, by which they are frequently accompanied; and the seat of these inflammations, or other obstructions, is generally determined either by the peculiar weak part of the person's body, or by the accidental presence of the exciting causes of such inflammations of the parts alluded to. In general, dentition acts, in these cases, by predisposing the body to be more easily affected by the exciting causes of these diseases: but, in other cases, it acts as their exciting cause. Let it be supposed, for instance, that the lungs are a child's weak part, and that, under ordinary circumstances, he would have a cough during dentition—let him be exposed to cold whilst cutting his teeth, and not only will he be more disposed to take cold at such a time, but the fever will be much more likely to put on the form of inflammation of the lungs than under ordinary circumstances. Here then dentition acts as a violent predisposing cause of disease. But let the child be predisposed to inflammation of the brain, then dentition will often act as an exciting cause; for whenever the body of a child is disordered, teething will create a greater flow of blood to the head than is natural. This increased quantity of blood will often be alone sufficient to excite inflammation of the brain when the body is predisposed to that disease; but it will have this effect more certainly, when it is joined to the inflamed and therefore irritating state of the gums which always attends dentition under such circumstances.

The material fact for recollection in this general account of the evils which accrue to children from the process of dentition is, that a previous disordered or unhealthy state of the child is, in the great majority of cases, necessary, before cutting the teeth can become a cause of disease. This is the material fact; for, if such be the case, it is generally our own fault when our children suffer much during teething. Were infants fed and attended to according to the plan laid down in a preceding page, dentition would be, comparatively speaking, an unimportant process. But, as the affairs of nurseries are at present conducted, parents may congratulate themselves when their children have passed the period of dentition; for it certainly forms one of the most important æras of a child's life. Danger will occasionally arise even in the most healthy children, and in those who are the most properly attended to, as a case related above shows; but the general fact is, that, if infants be fed on the proper diet, if air, exercise, and clothing, be allowed them in due proportion, and if their minds be kept under controul, the period of teething will pass over almost without being remarked.

Art. 3. *Medical Sentences.* No. I.

1.—Diet is a better remedy for most diseases than medicine: the latter often cures the disorder, but the former, if its use be continued, prevents as well as cures, because it generally strikes at the cause of the disease.

2.—Some diseases are very polite; they never come unless by invitation. The gout is one of these.

Art 4. *On the Gout and its Causes.*

Our article on the gout will not be liked—certainly not by the majority of those readers who suffer from the disease. And yet, we believe that it contains much that is true; but even truth too often gives offence.

A mystery has been made of the gout from time immemorial. This has arisen partly from the peculiar nature of the disorder itself; but, in much greater part, from its close connexion with certain agreeable but improper habits of life. This connexion naturally deceives us into believing that the fault, when we have the gout, is in the disease, and not in ourselves. Were the presence of gout less dependant on the luxuries of civilized life, it would be looked on with different eyes. If it arose from poor-living and not from repletion, from abstinence and not from too-full feeding, the mystery would cease; for the cure would be easy. No man finds it difficult to learn how to enjoy the good things of this life: the difficulty lies in knowing how to refrain from them. And yet, it might be thought, that the pain, which attends a fit of the gout, would be a sufficient guarantee against future indulgence: but present pleasure blots out the remembrance of pain which is passed; whilst the knowledge that the pain which is to come, during future attacks, is inevitable, *if* *the indulgences on which the attacks depend* be continued, is not sufficiently understood.

Another deceiving circumstance is, that the gout is considered to be an incurable disease; at least, that its attacks cannot be prevented from recurring at certain intervals. There are many diseases which have, even, in the public estimation, a better claim to be considered incurable; and yet these diseases are not looked on as mysterious. The mystery of the gout, therefore, does not lie in its incurability. The gout, however, is peculiar in several particulars. The periodical nature of its attack, its being apparently hereditary, the frequent capriciousness of its symptoms, the oddness of the part in which it generally seats itself, its apparent translations to more important organs, its being a disease which almost exclusively affects the rich and luxurious, and the unwillingness in patients to believe that it is the child of guilty pleasures—these, it is, which have led to the idea that the gout is a mysterious something which is not amenable to the common laws of pathology.

After all, the great question is this—Is the gout a curable disorder? It certainly is. The attack of gout is cut short and cured in many ways every day; and, what is of more importance, an abundance of persons have prevented the recurrence of the disease by attention and resolution in combating the causes which lead to it. A medical gentleman, who inherits the gout, and whose brother has suffered from its attacks for many years, was affected by the gout at the accustomed age. This gentleman had a large family, and was unable to support them except by constant attention to business: he therefore could not afford to be laid up once or twice in the year for a month, or one or two twelfths of his present existence. But he thought vigorously on the subject, forswore the tempting excitives of his complaint, had courage enough to act on his good resolutions, and he has now been free from an attack for more than thirty years. It is true, that the life of a country medical man, inasmuch as it includes much out-of-door exercise, is almost an antidote to the gout; but, in our friend's case, this antidote was evidently not sufficient to ward off the disease, otherwise he would not been attacked. It was, however, a great assistance; although, it is probable, that the new habits of life which he adopted would have been effectual even under much less favourable circumstances.

We believe, that the late celebrated professor, Dr. Gregory, was also a memorable instance of the power which we possess over the gout. His father, it is said, died a martyr to the disease at an early age; and it is well known that, before the age of thirty, Dr. Gregory himself was so crippled by its attacks, that it would soon have been impracticable for him to fulfill his professional duties, and probably he would not have long survived the severity of the disorder. Under these circumstances, he changed his plan of living, and succeeded in eradicating the enemy from his constitution. He died of another disorder at above the age of seventy years.

Every one may cure himself of the gout. We intend to be understood literally. It may be cured in all cases so long as the constitution is not destroyed by the disease. The gout, however, cannot repeatedly affect an individual without sooner or later disorganizing or destroying the powers of some vital part. In the loose nomenclature of the day, the symptoms which these states of disorganization produce are called gout, equally with the simple disorder from which they arise: but, whilst it is improper to adopt this faulty and injurious nomenclature, it is evident that no plan of treatment can raise up and new-model a broken-down constitution. Such cases as these, therefore, do not invalidate the assertion, that every one may cure himself of the gout.

The gout of young persons may always be cured; and even in the worst cases, in those, where, from repeated attacks, the limbs have become crippled, the digestive organs destroyed, the liver diseased, and the head in imminent and hourly danger of an apoplectic seizure, or where even palsy has robbed the body of its powers, though a cure may be unattainable, yet life may be made more comfortable, and the descent to the grave less rapid. The simple remedy is to avoid the causes which lead to these evils, and to adopt new and more congenial habits of life; the latter being, of course, varied according to the state of the patient, and adapted to the present condition of his bodily powers.

The causes then of gout will be pointed out in the present article; and, it is hoped, that the subject will be made sufficiently plain to show those who are liable to its attacks how they may themselves deduce the proper mode of eradicating it from the constitution.

Dr. Armstrong says, that the gout is only one form of inflammatory fever, and he is right. The inflammation which characterizes gout is as pure an inflammation from a common cause as pleurisy is. The causes of these two forms of inflammatory fever, indeed, are different, although they are both of a common kind; the seat of the inflammation also is different in the two cases, and, therefore, its appearance, as shown by the symptoms, is different, but they both belong to the same order of diseases. The same thing may be said of other inflammatory disorders which arise from common causes; rheumatism, erysipelas, inflammation of the bowels—all these, and many others, are cases of common inflammatory fever, as Dr. Armstrong teaches; and they only differ from each other, because, as the inflammation is situated in a different part, and the state of the constitution is different, therefore the nature of the disorder is different.

The causes of inflammation, as of all other diseases, are of two kinds; predisposing and exciting causes; and both of them, as we have explained in our last number*, are necessary to the production of the disorder. The predisposing causes are such as produce certain states of the body which make it liable to be acted on by the exciting causes of inflammation.

Dr. Armstrong, in his excellent lecture on inflammation, divides the predisposing causes into three classes or states of the constitution. The first of these states, he says, is, where the body is affected by some hereditary or acquired local weakness; the second is, where the body is in a state of general irritation; and the third, where the system is too full of blood, or where a plethora is present.

All or any of these states of the constitution predispose it to be affected by the exciting causes of inflammation; and, just as one or other of them predominates, is the inflammation fixed on this or that part, and then the disease becomes of this or that kind. If a person inherit a weak chest, or have acquired one by suffering from frequent attacks of chest-diseases, if the exciting causes of inflammation be applied: that is, for instance, if he take cold, the disease will be pleurisy or peripneumony perhaps. If, on the contrary, his hereditary or acquired local weakness be that state of the body which predisposes to gout, and the body be also in a plethoric state, the gout will be produced when an exciting cause of inflammation is applied.

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* See article "on the state which is called health, and on the mode in which disease is produced," page 171.

The hereditary nature of the gout or its apparent tendency to be transmitted from father to son has always engaged the attention of mankind: but the subject has been misunderstood. No disease is hereditary, strictly speaking; but that peculiar structure of particular parts which predisposes the body to be attacked by the gout under certain circumstances, may be, and is transmitted from generation to generation. Hence, as a son will probably inherit his father's organization, if he likewise inherit his father's habits of life, and indulge in those luxuries which lead to the gout, he will himself as surely be affected by the disease as his father was before him.

It is related by an excellent observer, that many of the inhabitants of a certain Scotch village were remarkable for possessing a nose of a peculiar form; and, on examining the portraits of some of the ancestors of the resident landholder, it appeared, that these noses were the exact counterpart of that of one of them, a former Chancellor of Scotland, who had not been very remarkable for the strictness of his moral habits.

Whatever then the peculiarity of structure may be which predisposes to the gout, it is transmitted from father to son with as much certainty as the Scotch Chancellor's nose was. But as it very seldom happens that this structure is so peculiar as to lead necessarily to an attack of the gout, the addition of other predisposing causes is commonly required before the disease is produced. It is probably for this reason, that the hereditary transmission of gout is so uncertain. It often happens, that the children of very gouty parents are none of them affected by the disease. In other cases, only a small proportion of such children suffer: indeed the variety in this respect is so remarkable, that several learned physicians have been led to doubt there being any truth in the hypothesis, that the gout is hereditary, in any sense of the word.

On the principle however, of like producing like, of the structure of the father's body probably descending to the son, it is to be expected, that the children of gouty parents will be more liable to the gout than persons who are not thus descended from a gouty ancestor: and indeed, it is found, on careful examination, that the majority of gouty persons are the children of gouty parents. Nevertheless this majority is but a small one. Out of 215 cases of gout, Dr. Scudamore found, that

84 were original, that is "cases of acquired gout, in which no family reference could be traced." In 105 of the cases, one or both of the parents of the patients had been the subjects of gout: in the remainder, the disease had only appeared in the preceding generation, or in the collateral line.

If the cases of acquired gout be to those in which the disease is hereditary as 84 to 215, it is sufficiently clear, that other predisposing causes besides hereditary disposition must exist for the production of gout. Dr. Scudamore arranges the predisposing causes of gout in the following order. 1. The adult age. 2. Particular bodily conformation. 3. Constitution and temperament. 4. The male sex. 5. Station of life and occupation. 6. State of the mind. 7. Severe study. 8. Animal food. 9. Strong liquors. 10. Indolence. 11. Plethora. 12. Too great an indulgence in animal pleasures. 13. Climate, season of the year and state of the atmosphere; and he sums them all up in a consideration of "*a morbid state of the digestive organs*" as the grand predisposing cause of the gout.

It would seem that some of these predisposing causes are more essential in producing gout than others. The gout is a disease of repletion, and therefore, a plethora or an overabundance of blood in the blood-vessels, is perhaps the most essential of these predisposing causes; for, although it would appear, that a morbid state of the digestive organs is a necessary preliminary to a fit of the gout, yet it is necessary that some other predisposing cause should exist to direct, as it were, to the structure in which the morbid action shall be seated. It seems necessary too, that the body shall be originally healthy, the veins full and dilated, the circulation hurried, and the temperament sanguineous; or rather sanguineous joined with some degree of irritability of fibre, or, as Dr. Scudamore expresses it, some weakness of the arterial system. Moreover, that the chest shall be capacious, and the action of the lungs vigorous and unimpeded: for, by the latter conformation of body, the quantity of blood is likely to be much increased.

The other predisposing causes are probably not so essential; at least the gout may be produced without any of them, being present in the constitution. An exception, however, may be made in favour of a too great indulgence in the use of rich food and of stimulating drink: for unless an overplus of nourishment be taken, that is an overplus when compared with the wants or expenditure of the body, it is evident that a superabundance of blood will not be produced. As for the rest, the adult age is not a necessary predisposing cause; for a few rare cases of the gout occurring in children have been recorded. Neither is the male sex necessary; for although women are generally attacked by the disease at a later period of life than men are, yet, the gout is sufficiently prevalent in the female sex when the other predisposing causes are permitted to exist. In like manner, persons in all stations of life, and of all occupations, will be attacked by the gout under certain circumstances. Neither are the remaining causes the depressing passions, severe study, indolence, indulgence in animal pleasures, and climate, &c. absolutely necessary for the production of gout; for its attacks occur under circumstances which do not include any of these predisposing causes. They all, however, operate strongly in assisting the more essential predisposing causes when present.

Many of them too, act as exciting causes of the gout, when the body has become highly predisposed to have the disease produced. Thus, a a fit of the gout is frequently brought on by sudden bursts of passion, or by severe study, or by climate, or by protracted debauchery of any kind.

The exciting causes of the gout, however, require a more particular enunciation. Dr. Scudamore enumerates, as exciting causes, 1st, excessive intemperance; and the use of champaign, as a part of the debauch, is mentioned as a peculiarly efficient exciting cause, it is said on account of its containing much free acid: 2d, acidity when produced largely by any means: 3d, obstruction or excess of bile when suddenly produced: 4th, the application of cold either with or without wet, especially when in concurrence with fatigue. In many cases, only standing on a cold and damp pavement has been sufficient to excite an attack of the gout: 5th, External injuries. In one case, the gout appeared in the toe on the third day after a broken portion of the thumb nail had been torn so incautiously as to make the part tender. "Very soon, the thumb and part of the hand put on a swollen and shining appearance, and was exquisitely painful. Suddenly, on the third evening, the pain quitted the thumb and seized the toe; next the ancle, then the knee, and lastly the great toe of the other foot." In three other cases, the gout followed a fall from horse-back, although no apparent external or local injury was produced by the fall. The pressure of a tight shoe, or an accidental sprain, is, in like manner, a frequent exciting cause of the gout: 6th, Fatigue and anxiety: 7th, The passions, when suddenly and violently aroused.

It will be perceived that these causes, both predisposing and exciting, but especially the latter, are not different from those, which, in their action on the human body, produce other diseases as well as the gout. It is from the combination of them, but especially from the peculiarity of that predisposing cause which constitutes the weak part of individuals, that the resulting disease is the gout, or any other of the inflammatory diseases which arise from common causes.

Now, however, we arrive at the consideration of a very difficult part of the subject. What is the proximate cause of the gout? or, in other words, how is it that the inflammation which results from a common cause of fever, acting on a certain morbid state of the digestive organs in a plethoric person, produces an inflammation of the toe? The exciting and predisposing causes of the gout are easily recognised; but it is not so easy to discover the proximate cause. When a sore throat follows the application of cold to the skin, the known connexion which exists between the mucous membrane, which lines the throat, and the skin, seems to afford a satisfactory solution of the problem: but we know of no such connexion as existing between the digestive organs and the part which is usually affected in the gout. It is true, indeed, that we are unacquainted both with the peculiar part of the joints in which the essential inflammation resides, and the part of the digestive organs which suffers previously; and this ignorance is, perhaps, a sufficient explanation of the mystery which hangs over the proximate cause of the gout.

It is supposed that the ligaments form the peculiar structure which is inflamed in the gout; but this is a mere supposition, and, moreover, it does not explain the violent inflammation of the skin which so universally occurs in this disease.

Fortunately, a knowledge of the proximate cause of the gout is not necessary to the elucidation of the best mode of preventing the occurrencce of this painful disease; although, such knowledge might be advantageous in improving our remedial means when the disease is actually present. It has been sufficiently proved, that the gout may be, in perhaps all cases, prevented from occurring, both by the history of the disease and by actual experience.

The poor, who labour for many hours every day, are seldom affected by the disease; even although they may indulge, either occasionally or habitually, in the use of a full diet, and of fermented liquors. Even the London coal-heavers, who drink, it is said, on the average, twelve or fourteen quarts of porter daily, are scarcely ever subject to the disorder. They become old, and die at a very early period of life; but they do not suffer from the gout. In them, excessive labour counteracts the effects of excess of stimulus. In like manner, those men who lead active lives, and live much in the open air, escape the gout, if even moderately temperate in their habits. Some, indeed, are more predisposed to be attacked than others are, and in them the precautionary means must be more strict; but even, perhaps, in the most predisposed, the disease may be warded off, in every case, by such a degree of careful abstinence, with regard to the quantity and quality of food, and of drink, as will emancipate the patient from the action of those causes which predispose to the gout.

How then does the gout arise? It would seem, that one of the greatest differences between the adult age, and the period which precedes it, is, that in the former a harmony and perfection of bodily actions exists, which is broken as years pass on. Children feel no ailments: full of life and activity, each part performs its due office silently and perfectly; so that a child may be almost said not to feel that it lives. After the period of puberty has passed, however, and when the growth of the body is completed, so that a natural outlet of that kind no longer remains for a superabundant or irregular diet, indiscretions and erroneous habits of life break this harmonious balance of the bodily actions, particular parts are irritated and thrown into disorder, what we call morbid sympathies are brought into play, particular structures become deranged, and thus diseases of importance are produced.

So it is with the gout. A healthy man, of rather a full habit, but of somewhat a nervous or irritable temperament, lives more freely than his bodily powers will bear. Repletion takes place, and, at the same time, the digestive organs are rendered irritable, or are, in otherways, morbidly deranged; inflammatory fever is produced, and the combined influence of the temperament, the state of repletion, and the peculiarity of the abdominal derangement, determines that that inflammatory fever shall appear in the form of the gout.

If this be the process by which the gout is produced, it is easy to deduce the method by which its attacks are to be prevented. If repletion be an indispensable preliminary, then it is plain, that, to obviate that repletion, is to prevent the formation of the disease: and that temperate habits are sufficient to ensure this desirable object has been proved by an abundant experience.

The prevention of the gout turns on a very simple circumstance: he who apportions his ingesta to his egesta will not have the gout. In other words, the secret lies in taking no more food than the *wants* of the body require. The habits of society, our mental and bodily occupations, and the mere action of the different parts of the body on each other, cause a certain wear and tear of the human body, which requires to be supplied from without. These necessary supplies are furnished by our organs of digestion, and a most agreeable property is given to us for the purpose of securing our attention to this duty of providing for the expenditure of the body. Indeed, the appetite for food brings with it so much pleasure in its gratification, that we are easily led to indulge in eating and drinking further than a continuance of health authorises. Moreover, the refinements of cookery, and the luxurious habit of providing a variety of dishes for one meal, still further excite us to overstep the bounds of healthy indulgence. If we add to these provocatives to excess, the further seducing pleasure of drinking wine or other fermented liquor, and the collateral aid of an indolent life, it will not appear extraordinary that a plethora, or a state of repletion of the body, should be produced in the constitutions of many persons, and that the gout or some other inflammatory disorder should follow.

It is, however, remarkable, that very many individuals exist who are ignorant that their convivial habits are excessive and hurtful, and who, therefore, scorn the voice of the reprover. One reason for this is, that the human body possesses a wonderful power of accommodating itself to the circumstances in which it is placed. The various outlets of the body, but especially the transpiration or the outlet by the skin, are so efficacious, that not only are the effects of an occasional debauch rendered innocuous, but the body is guarded for a long period against the evils which ultimately follow habitual excess in eating and drinking. An old man, of a most healthy and hearty constitution, and who had even been so healthy that he had been able to live very freely and with impunity all his life, spent a fortnight in one continued round of most luxurious living in eating as well as in drinking. He returned home perfectly well, and continued to be so, although during the whole fortnight his bowels had not been once relieved.

This gentleman's organization must have been very perfect, and indeed he still lives in tolerable health at the age of ninety; but, at all events, his case shows, that the bodily organs are made of very plastic materials, to be able thus to accommodate themselves to the combined influence of excess with regard to the ingesta and an obstruction in so important an outlet. A less evident but equally true deduction from this case is, that, with such accommodating bodily powers, no man ought to find any difficulty in restraining his appetites sufficiently to prevent the predisposing causes of the gout from being present in his constitution. For, it is thus evident, that the body will bear some degree of excess in every case, unless, perhaps, in some particular individuals, the peculiar local weaknesses of whose constitutions are such as to predispose violently to the disease.

It is not then necessary for a healthy man to measure the quantity and quality of his meat and drink by the exact rule of his bodily wants; for although it is probable, that he would live longer if he were to be even thus particular, some latitude may be taken without the gout being produced. Even a full diet may be indulged in with impunity, at least if regular and efficient bodily exercise be taken, and *no* excess in the use of vinous liquors form a part of the over full diet: the body may be rendered liable to the attacks of many other inflammatory diseases, but the gout will be kept at a distance. The gout, as we have hinted at in one of our medical sentences, is a fastidious visitor; for he requires much inviting before he makes his appearance.

It is probable that no person would have the gout who restricted himself to a simple nutritious diet, and did not indulge in the use of vinous liquors; at least if due exercise in the open air were taken, and the mind were not over-excited by an anxious or laborious employment. A single dish of animal food, with the accustomed vegetable and farinaceous additions, and the use of toast and water, is a sufficient antidote for the gout: the gout cannot flourish on such simple fare. Moreover, if the calls on the bodily powers be very great, as, for instance, if either the individual performs great labour, or engages laboriously in the pleasures of the field, the body will probably escape unhurt, if even a considerable excess be for the time indulged in.

But, as the use of vinous liquors appears to be particularly obnoxious to those who are in other respects predisposed to the gout, it is necessary that much more caution be observed with respect to them than to avoiding excess in the quantity of food which is taken.

It is impossible to point out every particular of the plan of diet, which each individual, who wishes to avoid the gout, should adopt: and indeed it would be useless to do so, were it possible; for, he who has not industry or enthusiasm enough to work out the details for himself, when the principle has been made manifest, is not capable of profiting by minute directions, however accurate and clear they may be. Pupils learn but little more from their masters than the power of teaching themselves; instructors may point out the proper mode of studying, they may direct their pupils towards the right path, and even give the principles on which true knowledge is founded; but they can do no more. They may assist in laying the foundation, but the superstructure must be reared by the patient labour of the pupil himself. And thus it is in discussing questions which appertain to the preservation of health; no one can practice the details of prevention without understanding the principle on which those details are founded; and if he understand the principle, he will experience but little difficulty in forming the details for himself.

At all events, the man who is sincerely desirous of preserving himself from a fit of the gout, will have the test of experience for a guide. The gout, like all other diseases, gives warning of its approach; slight symptoms of deranged health appear long before the disease shows itself in its proper form. He who has the predisposing causes of the gout present in his constitution is not in health. Let such a man attend to these symptoms; let him be aware that they point at some defect in his mode of self-management, some habitual excess in eating or in drinking, or in both; let him then have sufficient courage, not only to avoid the common impatience which leads to the cure of these symptoms by medicine, but to analyse his convivial habits one by one, and to vary them again and again, until the symptoms of deranged health disappear, and he will hear no more either of the gout or of its preliminary symptoms.

In our next number the treatment of gout will be discussed.

ART 5. *Medical Sentences.* No. II.

3.—Men do not die of time but of disease. Bad habits produce ill-health; ill-health, disease; and disease, death. The relation between time and old age would be different from what it is at present, if the habits of civilized life were less far removed from those of nature.

4.—No man ever fell down struck by apoplexy without having suffered from previous symptoms, which sufficiently pointed out the evil which was to follow—symptoms showing derangement of the stomach and fullness of blood in the head.

ART. 6. *Review of Dr. Reid's Essays on Hypochondriasis, continued from page* 190.

THE next cause of insanity which Dr. R. discusses is "*excess of abstinence,*" and he gives cases which illustrate his position; but it more frequently happens, that an unnatural abstinence is an effect than a cause of insanity.

Many cases follow, in which insanity was either followed or preceded by a *morbid affection of some of the organs of sense;* and although every part of the nervous system suffers in this way occasionally, the great majority of such symptoms refer themselves to palpable affections of the brain; and indeed, the whole of them probably arise from such affections either directly or indirectly.

Another cause of insanity which is only hinted at by Dr. R is particular *physical maladies,* or states of bodily illness. A case of this kind is alluded to, but it is not described.

The *atmosphere of London* is next mentioned among the causes of insanity. But it is said, that however impure this air may be, and however delightful and invigorating it is to escape from London and enjoy the fresh breezes of the country, especially in the months of summer and autumn, this change is not so *necessary* as is commonly supposed; and moreover, that the London atmosphere does not so often induce disease as the world thinks. Perhaps Dr. R. carries his opinion on this subject rather too far. The exhaustion of bodily and mental power, which is produced by the eternal competition, the unceasing collision of intellect which marks a London life, may do much to some; the bad habits of fashionable life may greatly injure others, and the diet of London may be hurtful to all, yet the stratum of smoke and of other impurities which constantly hangs over so large a city, must exert a considerable influence on the health of its inhabitants—witness the difficulty which exists in preserving the health of children who live in London—and again, how common it is to see the whole appearance of prevalent complaints changed by the occurrence of a great alteration in the atmosphere! How certainly, for instance, does a frost in December or November drive away the low spirits and hypochondriasism which mark the open weather of that season! but we proceed.

Dr. Reid now discusses the effect of *dyspeptic* and *hepatic diseases* in causing insanity. He well says that,

> "What are called dyspeptic or bilious complaints may, for the most part, be attributed to some error in diet, or excess in epicurean indulgence." "Hippocrates, one of our most venerable fathers in medicine, tells us, that he who eats and drinks little will have no disease. Dr. Cheyne, who had suffered dreadfully from the effects of an opposite course, laid it down, that in the regulation of our diet, we ought to aim at the lightest and

the least." Those persons can scarcely expect to escape the horrors of indigestion, whose meals emulate in frequency and continuance the pasture of an animal at grass. He who is sparing in the quantity need not be very scrupulous with regard to the quality of his aliment. By making a habit to rise from table with a certain degree of appetite, a man may save himself a great deal of trouble in the selection of his food. Nothing is more common than for an invalid to enquire of his physician, what dishes are proper for him, and what are not so. His doctor might almost as reasonably be required to tell him what was most agreeable to his palate, as what best agreed with his stomach."

The proverbial difference in tastes argues a correspondent difference in the powers of digestion. Hence Dr. R. does not recommend living by rule; but he says, "if we confine ourselves in our most substantial meal, to one dish, and that not a dish which is calculated to provoke rather than to satisfy the appetite, we may spare ourselves all anxiety with regard to the wholesome and unwholesome; a mean and servile solicitude, which debases the mind of a man and can do little good to his body." This is good reasoning as it refers to a state of health; but we fear that many curable chronic diseases would resist the powers of medicine, unless the diet were regulated with the strictest accuracy; and therefore, to such cases it does not apply.

An animal diet in moderation is recommended to the dyspeptic; as is also the observance of an occasional fast-day. Dr. R. also condemns that alternation of emptiness and repletion which usually attends on the London custom of eating large and late dinners. He objects too, to large and frequent draughts of hot water as a remedy against repletion; and says, that Burke injured his stomach as much by his refreshing draughts of hot water, as Pitt did by his excess in wine: allusion is made, at the same time, to the frequency of stomach-coughs, and the danger of relieving them by frequent emetics.

Dyspepsia is often produced by a want of teeth; and it is said that very old persons are often remarkable for possessing good teeth.

Hepatic disease is said by Dr. R. to be a less frequent accompaniment of dyspepsia than is commonly supposed; and hence he recommends that mercury shall not be given in large quantity, unless the case be unequivocally manifest. A short cough in the morning, and a want of power to lie on the left side, he considers to be the most common symptoms of an incipient liver complaint.

Much might be said on the connexion which exists between dyspeptic complaints and insanity. If it be true that few dyspeptics can be found, whose tempers are not changed for the worse by the existence of their complaints, and as Dr. R. says, "whose career of philanthropy is not liable to be checked by an obstruction in the hepatic organs;" if the jaundiced eye have become a watch-word, to show the effects of bilious disorders on the mental constitution, it can be conceived, that these ailments may form a powerful predisposing cause of hypochondriasism and insanity. Their influence is indeed so great, that it is questionable whether such complaints ever occur, without the digestive organs being first impaired in their actions.

After entering thus largely into the causes of insanity, Dr. Reid takes up the subject of *palsy, idiocy, spasmodic and convulsive affections.* Palsy, he says, often occurs at the decline of life, and it is generally caused by the unfortunate patient's improper habits, with respect to diet and general management. Nay, it is not unfrequently thus produced in much earlier life. In some few cases, however, it seems to be a sign of the "gradual mouldering away" of the constitution. The mind, in like manner, becomes palsied; and, as age advances, mental debility is as common as bodily decay. But here again intemperance plays its part, and as frequently hastens on the failure of intellect as it does the destruction of our bodily powers; whilst, in those who are predisposed to mental complaints, the mind is often thus destroyed before the body suffers materially.

Intemperance in diet, intemperance in study, or mental exertion, and intemperance in medicine will thus produce idiocy; and Dr. R. gives cases which sufficiently establish the fact. In one curious instance, the disease put on the appearance of a palsy of the affections. The patient said she could see all her family lie dead at her feet, and the object of a long-continued ardent and tender passion became at once indifferent to her. Yet this person felt an anxiety to do what was right: her affections only were gone, but her sense of duty remained.

The occurrence of paralysis is often very gradual. An abundant warning of the approaching evil is generally given, if the patient be capable of attending to it, or be inclined to do so. These preliminary symptoms are, in all cases, connected with slight affections of the head. Head-ache, giddiness, rushings of blood to the brain, singing in the ears, transient loss of sight, or of recollection, form the principal of these signs; and with them are joined occasional torpor, or numbness of particular parts of the body, and other similar affections.

So also, in the case of impending epilepsy, the same preliminary symptoms are commonly present; and, joined with them, uncommon drowsiness, or sense of intoxication, an habitual unsteadiness on the feet, and an incessant restlessness of mind as well as of body. When the fit approaches more nearly, flashes of light appear before the eyes, and head-ache with dizziness and often a sense of faintness which almost amounts to syncope, present themselves.

Well is it for those persons who possess the talent of observing these warning signs in themselves; and who can command sufficient energy to take the necessary precautions for averting the diseases by which they will otherwise be inevitably followed!

There is a great difference, however, Dr. R. says, between paralysis and epilepsy. Paralysis is a more tangible disease than epilepsy; the former is permanent, the latter transitory; the one runs a steady course, and is little dependant on times and seasons; the other occurs only at intervals, and those intervals are often so precise and connected as it were with habit, that if the association which exists between the time and the attack be broken, and the fit be thus only once prevented from occurring, the disease will often take its flight for ever. Paralysis affects the bodily powers rather than the mind; epilepsy, in its progress and by repetition, often robs the mind gradually of its most valuable characteristics, until at last the patient's body is left "an empty casket, which serves merely as a melancholy memento of the jewel which it once contained."

It is often difficult to distinguish hysteric seizures from these more important kinds of fits; but this resemblance between dangerous convulsive diseases, and such complaints as owe their existence to untutored and irregular states of the mind, shows us, that passion, or the habit of giving way irrationally to sudden and impetuous movements of the mind, may be instrumental in producing an attack of much more severe diseases in those who are predisposed to them. Hysteria is always a sign of an ill-regulated mind, and in like manner, sudden bursts of anger have not unfrequently given rise to even fatal attacks of apoplexy, or of other convulsive disorders.

In this essay on palsy, &c., Dr. R. narrates several curious cases of convulsive disorders, which were produced by apparently inadequate causes: of ladies, for instance, who were thrown into convulsions by the sight of scarlet, or of other colours; or, by the sudden falling of a tea tray, or even of a black hair-pin; whilst one of them had not long before gone through the pain and difficulties of child-bearing, without appearing to be injured thereby. How much must an ill-regulated state of the mind have had to do with these cases! An exposure to real misfortune, or an imperious call to habitual labour, especially in the open air, would probably cure the majority of such cases.

The 18th Essay is on *the Hereditary Nature of Madness,* and it is a very important subject for consideration. It is better to be heir to a good constitution than to inherit a large estate; and as the one descends to posterity, if possessed by ourselves, almost as certainly as the other, Dr. R. inveighs strongly against those, who, knowing that they are predisposed to insanity, marry, and then transmit the direful evil to their children.

"In a case like this, says he, marriage itself is a transgression of morality. A man who is so situated, by incurring the risk of becoming a parent, involves himself in a crime, which may not improbably project its lengthened shadow, a shadow too, which widens in proportion as it advances, over the intellect and the happiness of an indefinite succession of beings. The ruffian who fires at the intended object of his plunder, takes away the life of him only at whom his aim is levelled: the bullet which penetrates the heart of the unfortunate victim, does in general no farther mischief. But he who inflicts on a single individual the worse than deadly wound of insanity, knows not the numbers to whom its venom may be communicated; he poisons a public stream, out of which multitudes may drink, he is the enemy not of one man but of mankind."

This is very strong language, and we may hope, indeed, that it is not exactly founded on truth. Dr. R. goes on to say, that scrofula and gout, both of which are said to be hereditary, may be eradicated from the constitution by proper care —why, so may the predisposition to insanity, and is every day, although Dr. R. thinks otherwise. Nay, it is probable, that insanity is less likely to appear in a man's offspring than scrofula, if not than gout. Few of the children of those who are scrofulous escape the disease in one form or other; whilst, on the contrary, few of a lunatic's children become insane at any part of their lives. Twenty persons may be scrofulous, and it may be concealed; insanity cannot be so easily placed behind a curtain. In our opinion, it would be more philanthropic, and more beneficial, to show those who are hereditarily predisposed to insanity, how they may avert the evil from their children, if not from themselves, than to fulminate anathemas against their marrying; especially when they are thus forbidden to fulfil the first law of their nature. Besides, in most cases, the anathema will fall useless, except in producing distress, for men will marry; whilst the preventive directions, if they be good, will at once hold out hope to those who much require its cheering influence, secure for those who are to come, a better education, and probably succeed in fulfilling the desired purpose. Let a man be distinctly shown how few persons become insane, whose minds are well-regulated, and how many are secured from feeling so dangerously, as well as acutely, the slings and arrows of outrageous fortune, by the stores of useful information, and the reasonable habits which they possess: do this and he will educate his children accordingly. It is the biassed bowl which errs from the straight line. Let it be made clearly apparent to those who are born of insane parents, that, by moulding their children's minds equally and without bias, the latter will roll on steadily and directly towards truth and rectitude, and avoid the effect of those collisions which society brings, and which precipitate the predisposed into madness; and then if they themselves avoid marrying such as are similarly predisposed, it cannot be necessary to interdict so large a number of unfortunate beings from what is considered to be, by those who have it not at least, the greatest blessing which the world possesses. Cases of evident imbecillity may occur, to which these observations do not apply; but if the children of one who is predisposed to insanity, be brought up in habits of moral and physical health, a very small proportion only of them indeed, perhaps not one, will become insane.

Our author next discusses the subject of *old age;* and here again, we are sorry to meet with common place morality, which is unworthy of an elegant writer like Dr. R. "It is matter of surprise," says he, "that, by a person of an unimpaired reason, longevity should ever be regarded as an object of ambition." Dr. R. will think otherwise when he himself becomes old. "The wick of life," may emit, "in proportion as it lengthens, a dimmer and more languid flame;" but an old man would tell him, that as long as it lasts it is sufficient to light him to such happiness as he can enjoy; and he wishes for no more, at least if his body be in health The trite observation of old age being a second childhood, will bear a different meaning from the common one. If happiness be the summum bonum of this life, who are so happy as children; and it may be in like manner asked, who is so happy as a healthy and reasonable old man. The boisterous strength of middle life may look on such happiness with contempt; but the calmness of a summer's evening is perhaps more agreeable than the violence of the mid-day sun. The vulgar mistake those wrecks of mortality which the old age of the sensualist, and the ill-educated exposes, for the necessary lot of human nature: but we expected a different view of things from Dr. Reid. If he had known old Cornaro, he would not have called him absurd for saying, "since nothing is more advantageous to man upon earth, than to live long"—he would have seen that the calmness and the cheerfulness of a healthy and contented old man, offer as fair a mark for the affections to rest upon, as the more obtruding beauties of earlier life. Let him see two such old persons together, friends of fifty years standing, and then let him say whether men are to be put out of the world because they are old; well-rounded sentences will not make it the more proper. Let the debauchee, and the froward man die of old age, worn out and disliked at 50; but let that real ornament of human nature, a cheerful old person of 100, live long to show us what life is, and how long it may be made to last!

(To be concluded in our next.)

Art. 7. *On Mr. Alcock's New Operation for Defective Roof of the Mouth.*

We had much pleasure, the other day, in assisting our friend, Mr. Alcock, of Piccadilly, in performing a new operation, which is at once highly creditable to him as a surgeon, and is likely to afford the means of cure to very many persons whose complaints have hitherto been considered, even by the best surgeons, to be incurable.

Every one is acquainted with persons whose articulation in speaking is defective, in consequence of the roof of the mouth being imperfect. In many cases, indeed, the affected person can scarcely speak with sufficient distinctness to be understood. The nature of this defect in the mouth is such, and the part, in which it is situated, is so difficult to be got at, that surgeons have ceased to contemplate the possibility of applying an adequate remedy, except in certain cases; and persons thus affected, have been obliged to bear the inconvenience of their defect, or have been content to improve their power of articulation, as far as can be accomplished, by careful pronunciation.

Defects of the palate are of two kinds; one in which the bony roof of the mouth is deficient, and the other in which the uvula and the soft palate are divided into two parts. The first of these cases is often relieved by wearing a silver-plate on the roof of the mouth; but no remedy had been suggested in this country for the latter, until Mr. Alcock performed a modification of the operation for hare-lip on the part, and it perfectly succeeded.

The patient was a young man, whose articulation was so indistinct, on account of his soft palate and uvula being cleft down the middle, that he would have been obliged to give up an advantageous situation if he had not succeeded in obtaining relief for his complaint. It may be mentioned, as an interesting circumstance of the case, that a high surgical authority had decided that the defect was irremediable. After the parts had healed, the patient spoke with so much more distinctness, that he retained his situation, and it can scarcely be doubtful that he will, by practice, teach himself to speak as distinctly as other people do.

Mr. Alcock is preparing to lay the details of this case and operation before his professional brethren.

ART. 8. *Medical Sentences.* No. III.

5.—Irritation, either mental or bodily, is the cause of almost every disease.

6.—The most common corporeal irritations are those which arise from repletion.

ART. 9. *On the use of Malt Liquor and other strong drinks, and on the warmth of Silk Waistcoats.*

A correspondent begs us to state our opinion on the kind of malt liquor, or of wine, which is the most proper for young growing persons, and also on the effects of a silk waistcoat worn over flannel.

These are sensible questions, and we have great pleasure in answering them.

The use of strong liquors of any kind is, in almost all cases, an acquired and unnecessary habit. Custom has sanctioned their employment; but, it is doubtful, whether an abundance of nutritious food would not enable a man to go through any required labour without the stimulus of strong liquors.

However this may be with regard to working people, it is quite certain, that if young persons, even those of from ten to sixteen years of age, require ale or wine, it is an exception to the general rule. If the health of such persons be perfect, if they be supplied with nutritious food without trash, and be allowed to take an abundance of exercise in the open air, no strong liquor will be required. But, as it generally happens, that the habits of London children are not such as lead to health; as the latter are commonly fed on improper food, and are kept too much within doors, the health of such children is usually deranged: their digestive organs are debilitated, their tongues are not clean, their skins are pale, and their excretions unnatural.

Whenever this state of the health is present, the use of strong liquor will be hurtful; and, therefore, where growing young persons are so affected, it will be improper to allow them ale or other liquors. The proper course, in such cases, is to change the person's habits, to cure his health, and then, it is probable, that he will not require more than the proper quantity of plain nutriment without ale. The great point, in these cases, is to attend to the tongue. If it be foul, the digestive organs are assuredly deranged; they are probably oppressed and debilitated. The cure of such states generally consists in the employment of very simple means. If there be no fever present, living on small quantities of boiled or roasted mutton or beef, without much vegetable, and avoiding pastry of all kinds, as well as all puddings except those of rice, bread, or batter, leaving off butter, and abridging the quantity of fluids taken, whether tea, water, or otherwise; these, with an open state of the bowels, and, perhaps, occasionally, one or two grains of calomel, with six or eight of rhubarb, will generally soon cure the complaint; at least, if exercise in the open air be taken, and the functions of the skin be kept in order by frequent ablution and by sufficient clothing.

It sometimes does happen, however, that young persons are weakly without being in a marked state of deranged health; where the tongue is clean, or tolerably clean, and no very perceptible complaint exists. In these cases, malt liquor may often be given very advantageously. About half a pint of good ale in the day, given to a young person, of either sex, of from twelve to sixteen years of age, is the proper quantity, and ale is better than either porter or beer, and, in general, than wine. Care should be taken that the ale does not contain much acid: and, therefore, if it effervesce on the addition of a little salt of tartar, or carbonate of potash or soda, it should not be taken without such addition.

If the use of ale in this quantity produce headach or sleepiness, or a flushed countenance, then it should be discontinued, and the treatment recommended above for deranged health be adopted.

Indeed, with the exception of the calomel and rhubarb, that treatment is probably the best for preserving the health, as well as regaining it when lost; and it is also mainly applicable to those growing persons who are weakly, and for whom we have recommended ale.

With regard to the second question asked by our correspondent, it may be said, that many medical men are very partial to the use of silk clothes over flannel or calico; and it is certainly very advantageous. Many persons say, from experience, that silk, thus worn, is very warm; and, it is certainly the most effectual dress for preventing injury from the moisture and coldness of the autumnal and early winter months. It keeps in the electricity of the body, and thus adds greatly to the comfort of the wearer. But, to have its full effect, silk stockings should be worn over woollen ones; flannel drawers also; and, the silk as well as flannel waistcoat should have sleeves.

ART. 10. *Medical Sentences.* No. IV.

7.—Every disease gives warning of its approach: attend to this warning, and the disease may often be prevented.

8.—Let old persons, who suffer from chronic winter coughs, beware of exposing themselves to a very cold atmosphere. Many such die in the winter season with cold skins and blue lips from being thus chilled.

9.—The powers of life are easily destroyed in old persons. Warmth and rest are the old man's best preservatives.

No. 12, of this Journal, will be published on the first of February.

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Art. 1. *February.*

A London February is often a very charming month, at least if a due quantity of frosty weather have occurred in January: for, though the mornings are generally overcast, yet a splendid day not unfrequently follows, clear, bright, and very warm. If such a day occur on Sunday, the whole population is out of doors; and, if the trees were in leaf, the parks would, in some degree, emulate their May-day joys.

If February is often so fine in London, what must it frequently be in the open country? there the morning, as well as noon, is often beautiful. Doubtless, the human body partakes in the vivifying effects of these early anticipations of spring. The spirits are more buoyant, and the whole constitution is more capable of setting at naught the approaches of disease.

The early part of February 1820 was composed of exactly such weather; the days were fine, and even warm; the trees seemed ready to bud, and the elders had even shot out something like leaves:

but the latter half of the month was exceedingly cold and disagreeable—the thermometer was generally below the freezing point, and the high winds which prevailed were of the most cutting description.

Much variation took place also in the form of the prevailing diseases. The intense bilious character of the January disorders in some degree relaxed, although, in the early part of the month, no perceptible difference existed; but, afterwards, the chest became decidedly implicated, and somewhat later in February the head.

Pulmonary inflammation was very common; and, although the complaint was, generally, in children, an inflammation of the membrane, which lines the bronchia or air-tubes—because, indeed, it is this part of the lungs which is, in almost every instance, affected in them—yet, in adults, pleurisy was not uncommon, as was marked by the painful affections of the sides and chest, and the short cough, or even want of cough, instead of the frequent hollow cough and abundant secretion of phlegm which characterized the bronchial affections of the heavy autumnal months.

And, although we catch cold at all times of the year, yet, with the changes of the weather, and of the form of common complaints which are described above, colds became less prevalent, though such as did appear were more prone to form themselves into violent disorders than the mucous affections of the preceding months.

At somewhat a later period of the month affections of the head become more prevalent. Apoplexy was not uncommon in grown-up persons, whilst inflammation of the brain appeared in too many cases amongst children.

Coincident with these diseases, every one who was ill complained more of his head than under ordinary circumstances. This shows how much the general aspect of disorders is dependant on the peculiarities of the times and seasons: and, to express accurately this prevailing tendency to head disease, we should say, that whilst those old persons who were violently predisposed to apoplexy fell down, overwhelmed by an attack of that disease, others less decidedly prepared for its attack applied for the relief of giddiness and rushings of blood to the head, and those affected by other disorders, or who were in their usual health, complained more of headach than under ordinary circumstances.

Nothing can be more interesting than to observe the wide-spreading effect of atmospherical influences on the aspect of diseases; because it forms one of the best of the many illustrations which exist of our bodily health being in so great a degree regulated by circumstances external to the body itself.

The observation, indeed, becomes the more important, because, it is perhaps equally true that this susceptibility to the reception of impressions from peculiar states of the surrounding atmosphere is not natural to the healthy body. Although the climate of England is more variable than that of many other countries, and, therefore, though it is, on that account, marked by a greater variety of diseases, yet, if our countrymen would be careful enough to preserve their constitutions in a state more nearly approaching to that of health, the climate might be various, it might be cold to-day and hot to-morrow, and cold again the day after, but the body would brave it all.

Health is seldom destroyed by an attack of disease, unless the vital actions of the constitution have been previously interfered with by a disordered state of the general system; and as this chronic ailment, which forms the stepping stone for the attack of more serious complaints, is, we believe, entirely produced by an erroneous mode of conducting the general health, it behoves every one to learn how he may fit himself for braving the inclemencies of the winter's wind, and its alternations with almost the heats of summer. That such an art may be learned is most certain, as may, in some degree, be inferred from one or two of our preceding articles. On the present occasion, however, we have only to show how we, sinners as we are, may best guard our ailing and therefore susceptible frames from the attack of February disorders.

February, however, on the whole, is perhaps a less unhealthy month than either January or March. It is less cold than the one; and the equinoctial winds, which characterize the other, and blowing from the east, at once dry up the atmosphere, and fit the body for its severest inflammatory attacks, have not yet come on, so that the directions given at the end of our article on January apply equally well to the whole month of February. Brisk cathartics on the approach of such diseases as have been alluded to above, abstinence occasionally from animal food and fermented liquors under similar circumstances, and an early recourse to bleeding or cupping in such as are predisposed to apoplectic attacks, form the outline of our precautionary recommendations.

To prevent is always better than to cure; but, whilst it is to do a good work when we prevent the attack of an acute disease by warding off the preliminary symptoms above alluded to, it would be much better so to fashion our habits as to prevent them entirely, not by attacking their precursory symptoms roughly, but by learning to mould our habits into such a gentle and congenial routine as will secure health, and, in its train, an almost uninterrupted series of agreeable bodily sensations.

OBSERVATIONS ON CHILDREN.

ESSAY THE TWELFTH.

Art. 2. *On the Evils of Teething continued.*

Notwithstanding so much may be done to avert the dangers which threaten children during the period of dentition, yet, whilst so many infants die or suffer greatly whilst teething, scarcely any of them escape some degree of inconvenience. In almost all children, the gums are much inflamed and swelled, the mouth is hot, the tongue white, and the skin dry and hotter than is natural; the child too is restless, and shows that he suffers inconvenience by biting his fingers, or any toy which he may hold in his hand. In more severe cases, the fever is increased in violence, the cheeks are deeply flushed, and the child starts in his sleep, and is very cross when awake. In short, considerable fever is present, and is in all cases attended by so much local cause of uneasiness as to make him very irritable.

When symptoms like these occur, it becomes necessary to retrict the child with regard to the quantity and quality of his food, for it will generally happen, in such cases, that he has been partially or wholly weaned. The usual remedies also in cases of fever are indicated; such as purgatives, the warm bath, and, if symptoms of inflammation of any vital organ be either present or threaten, bleeding. If the child live entirely on the breast, he should not be permitted to suck so often as before; if he be partially weaned, all food except the breast milk should be interdicted; whilst, if he have been wholly weaned, fluid food only should be allowed until the symptoms have in some degree yielded.

In thus recommending purgative and other medicines in these cases, it becomes proper to observe, that in the majority of cases, at least, where the child was previously healthy, and had been fed properly, it will be sufficient to make the above-mentioned restrictions in his diet without giving him medicine; for, under such restrictions, the feverish irritation will subside in the course of a few days.

A great local means of giving relief still remains for adoption. Lancing the gums should never be neglected in these cases. It is true that many persons are afraid of this remedy; but it is without a cause: for, the best writers and anatomists agree, that lancing the gums never produces injury to the child. The gums appear to possess the property, through life, of being very patient of injury from external causes of irritation; they bear to be cut and bruised without suffering materially. In this case, therefore, no injury accrues from the division, and much good results from it; for, even, if the tooth do not come permanently through, yet the vessels of the part are emptied of their blood, the tension is taken off, the inflammation is lessened, and, to a certain degree, the cause of irritation is removed. In the same way, it is untrue, that, if the wound in the gum heal over the tooth, the future passage of the tooth is made more difficult by the cicatrix in the gum being harder than the gum is in its natural state. The scar on the gum is not harder than the natural gum is: indeed, if the analogy of the skin may be taken, it is softer; for all cicatrices on the skin are less capable of resisting injury than the skin itself is, and hence an old wound is more likely to break out again than a new ulcer to be formed on the unbroken skin.

At all events, it is the opinion of well-informed medical men, that lancing the gums, when they are swelled and inflamed during dentition, is always advantageous, and that it is never followed by harm, and therefore that it ought to be adopted in every allowable case.*

In the majority of cases, this fever of teething will gradually give way to the treatment which is here recommended; but it is still necessary to keep a watchful eye on the child; not only because more dangerous diseases are hanging over him, but because they may be actually present in his constitution. In all cases of feverish complaint, indeed, great care and observation are necessary, not only to mark the time when more severe diseases creep on during the existence of such complaint, but to be sure that they do not exist at the time.

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* The mode of lancing the gums is not immaterial. If an infant's mouth be examined, it will be seen that a ridge runs along the middle of the gum for the whole circle of each jaw. This ridge is harder and more compact than the rest of the gum, and, therefore, it probably is of essential service to the infant in press-

When the fever is simple, that is, when no part of the body, in particular, is oppressed or obstructed or inflamed, it is seldom attended by dangerous symptoms; and, therefore, though the

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ing on the nipple, and in performing the other very limited offices for which something like teeth are necessary to a child. In lancing the gums, it is necessary to divide this ridge; for although the front teeth of an infant appear, on examination, to push forwards the gum so much in front as to make it probable that they will cut the gum at that part, yet it always happens that they appear within the ridge.

In lancing the gums, therefore, the part should be cut freely, and in the shape of an X, the incisions being carried down to the tooth, and made to cross each other on the tooth itself. They should also be made less freely on the inside than the outside of the tooth; for, as the rudiments of the second set of teeth are placed in the jaw within the circle of the first set, a deep incision in that part might be injurious. It is necessary too that the incisions fairly lay bare the teeth; for, unless this be done, the lancing will not prevent the tooth from still pressing on the gum: especially as the cavity in the gum, in which the tooth lies, is lined by a smooth and denser structure than that of which the rest of the gum is formed.

skin may be very hot, and the cheeks much flushed, the pulse very quick, and the other symptoms of fever violent, no present danger is to be apprehended. But if oppression or obstruction, or inflammation of any vital organ occur, and such diseases would be very likely to arise even on account of the quickness of the pulse and consequent increased action of the heart alone, then danger approaches, and it is requisite that this new aspect of the complaint be recognized and attended to as speedily as possible.

The important organs which are here alluded to, and which are so liable to give rise to dangerous diseases when they are obstructed or inflamed, are principally situated in the three great cavities of the body, namely, of the head, the chest, and the abdomen ; and as none of these organs can be materially deranged without corresponding symptoms being produced, it becomes necessary, in simple fevers, to make frequent and minute examinations of the state of action of these organs.

When the brain, or principal organ contained in the head, is inflamed, or is oppressed with blood, head-ach to a greater or less extent will be present, either with or without, too, a similar pain stretching down the back-bone. Head-ach occurs indeed in most cases, even of simple fever, where no violent symptoms exist ; but where the brain is more decidedly implicated, the symptom will be more urgent, there will be also heat of the scalp, and a great increase of pain on the patient's shaking his head. The eyes too will be unable to bear the light, and the face will often be much flushed; restlessness will be present, the child also will be dull and heavy, and peevish, or he will be very irritable, and will start with alarm at small noises: indeed more urgent symptoms will progressively show themselves, such as delirium or a state of stupor.

In examining, therefore, whether the brain is affected in the feverish complaints which arise during teething, a reference should be made to all these symptoms, and if the child do not labour under a very urgent state of any of them, it may be concluded that the head is free from dangerous symptoms. Nevertheless, as inflammation of the brain, or, in other words, water in the head, more frequently arises during the feverish complaints of teething than inflammations of other vital organs do, or than it does in the fevers which arise from cold or other similar common causes, it is necessary to be very particular in taking measures to be satisfied that no complaint of that kind is creeping on undetected; and, therefore, if the least doubt on the subject exist, let it be resolved by the greater experience of a medical man.

But, as the subject of inflammation of the brain in children is very important, and as similar diseases of the head more frequently arise during teething than at any other period of a child's life, it will perhaps be proper to enlarge further on the signs of head-affections in children.

A good treatise on Hydrocephalus is still a desideratum. All authors, who have written on that subject, are wanting in the important particular of describing the symptoms of hydrocephalus as they occur in children of different constitutions. Hydrocephalus is described, by nearly all of them, merely as a disease of inflammation; and yet, many children die of disease of the brain from teething, or other cause of hydrocephalus, without inflammation forming any part of the complaint. The child of a medical man was suddenly attacked by head-disease; his brain was evidently affected; indeed his powers were, as it were, overwhelmed by the disorder. The child's father imprudently bled him; when he suddenly sunk and died—increased action of the heart and arteries never forming a part of the symptoms, except just before death occurred, when a transient excitement of the heart ushered in the fatal event.

This case bore an accurate resemblance to those cases of congestive fever described by Dr. Armstrong, in which, the cold fit continues throughout the disease, and the hot fit never appears. In fact, the child died of congestion of the brain without inflammation; for hydrocephalus being only a fever, in which the great local symptom of the complaint is situated in the brain, it is subject to the same laws as all other fevers are: that is, it may either be characterized by the symptoms which mark a congested state of the veins of the part, or by simple excitement of the arteries, or by a true inflammatory state.

The symptoms which characterize these different states are very different from each other, and the treatment of them is also very various: we shall not, therefore, possess a perfect account of hydrocephalus, until some author investigates the disease on this or a more extended principle.

Dr. Nicholl, the other day, wrote an excellent little treatise on what he calls Erythism of the brain, by which term he designates very many and various states of oppressed and excited brain; states, as it is important for us to remark, which materially differ from the state of pure inflammation of the brain. Great praise is due to Dr. Nicholl for thus extending our knowledge of hydrocephalus so essentially; for although it is probable, that he is ignorant of the true relation which these cases bear to the inflammatory hydrocephalus, yet, to have observed such important facts is no mean sign of intellect; and, it cannot be doubtful, that his work will lead other medical men to view the disease in a new light, and that thus, perhaps, the foundation is laid for an improved pathology of a disorder which is often incurable, and always very dangerous.

The symptoms which mark that form of the disorder, in which the veins of the brain are congested or overloaded with blood, differ widely from those of inflammation of the brain: indeed, they bear an opposite character. In the congestive case, the skin is cool, and of a muddy appearance; the bodily powers are languid and oppressed, the pulse is soft, compressible and heavy, and the child's mental, as well as bodily powers, are sluggish and overwhelmed: in inflammation, on the contrary, the skin is hot and flushed, the pulse hard, bounding and resisting, and both the mental and bodily powers are in an equal degree excited to a state of preternatural activity. These are great and important differences; and, when it is recollected, that particular cases take this or that type according to the internal peculiarities of the child—when also, that these individual peculiarities may be so varied as to afford every variety of case between the most marked form of congestive fever and the purest and most violent inflammation, it is not wonderful that the works in which the previous or actual symptoms of hydrocephalus are described, should be defective. They contain, indeed, a great variety of symptoms, many of which, from being of opposite characters, are incompatible with each other, and therefore could not exist in the same patient.

This, then, leads to the great fault of the existing works on hydrocephalus. A multitude of symptoms are described in them, as occurring in hydrocephalus, and which do really occur in certain cases of the disease; but, for want of that knowledge of the pathology of the disease which would explain this great variety of symptoms, the whole of them are mingled together without order or connexion, and form a confused mass of contradictory information, which thus becomes nearly useless from its mere extent and minuteness.

It should be further stated, that since, in probably every case of the purest inflammatory hydrocephalus, the first symptoms of the disease put on the congestive form—because almost every fever has its cold fit, and the latter, and the state of congestion, here alluded to, are nearly synonimous—the symptoms, which precede an attack of hydrocephalus, are, generally speaking, similar: at least they are much more uniform than those which characterize the disease when it has fully formed and become imminently hazardous. This is very important, especially to the unprofessional readers of these pages, the legitimate object of whose medical studies should be the prevention of diseases, by marking and dissipating their preliminary symptoms, and not the cure of them when fully formed.

The very earliest then of the symptoms of hydrocephalus are those of sluggishness both of mind and body; for although, where the disease follows the irritation of teething, these symptoms are less permanent than when it is produced by irritation of other parts of the body, and although the irritability, which teething directly induces, gives a somewhat opposite tendency to the symptoms, yet this very circumstance affords an additional discriminatory mark of the true state of the case; for the child will be at once irritable and sluggish—fretful and heavy.

One of the first symptoms which precedes an attack of hydrocephalus is an indisposition in the child to be amused. The patient becomes silent and irritable, avoids his friends, dislikes to be noticed, and shuns the light. His complexion begins to fade, and his eyes appear dull; his appetite fails, and, at the same time, his secretions and excretions are in a great degree suspended. He complains also sometimes of giddiness, as well as of pains in other parts, especially in the nape of the neck; and yet he will answer "no" if asked if he be ill. In addition to these symptoms, Dr. Golis of Vienna, in his late work on water in the head, remarks, that children, who are threatened with this disease, walk as if with labour, and without equipoise or firmness. "In stepping forward," he says, "they often raise the foot as if they were stepping over a threshold, and they totter and stagger as if drunk." Also, in conclusion, he says, that "indifference succeeding to increased sensibility and irritability, a constipated state after habitual looseness or diarrhœa, a scanty and usually yellow urine with or without sediment; dryness of the skin, which, previously, on the slightest exercise, even on eating and drinking, and particularly during sleep, perspired profusely; sleep without medicine suddenly occurring in restless children; remarkable gravity and earnestness which had never been previously noticed—these, taken together with the symptoms already mentioned, are the signs by which the turgescence of hydrocephalus may, with great justice, be suspected."

The word turgescence, here used, is a very proper one, for it probably describes the true state of the brain under these circumstances.

Infants, when threatened with the disease, vomit more frequently than in the healthy state; they "wake suddenly with a cry, become soporose from slight overloading of the stomach; and their pulse, from trifling indigestion, or even in the best (apparent) health, frequently deviates from its natural regularity."

In some children, symptoms, like those above described, continue with more or less intensity for some time, often for many days. In some, they go on even to the end of the disease; the child only becoming more listless and inactive until occasional paroxysms of fever, with flushed cheeks, either do or do not occur, the skin being, in the intervals, pale, and of a dirty hue; the child falls away, and becomes flabby, as well as emaciated; and, at last, the stupidity and listlessness degenerate into coma, and death follows, either with or without convulsion, and a preliminary attack of fever of greater and more continued violence.

These are the cases of congestive hydrocephalus which are mentioned above, cases in which little or no arterial re-action occurs, and of which inflammation forms little or no part.

In other cases, and as it more commonly happens, the symptoms of congestion, as above described, give way, and are gradually changed for symptoms of an opposite character. The senses of the patient become acute instead of dull; he is sleepless instead of torpid; his irritability is increased, so that he expresses alarm on being touched, slight noises terrify him, and he cannot bear the light; he throws back his head and knits his brow; the pupils of his eyes are of a preternatural smallness; he screams frequently, and for no apparent reason, his thumbs are bent into the palms of his hands, indeed the hand is sometimes even bent on the arm, the fingers being extended downwards, whilst the toes are bent on the soles of the feet; fever comes on or increases, so that the skin is hot, and the cheeks are flushed; the head, too, is particularly hot, especially at the front and back parts, and the child puts his hand frequently to his head, or pulls often at the nape of his neck.

These symptoms, when decidedly marked, portend the actual existence of inflammation of the brain, or of a greatly excited state of the brain at least; and therefore, if even they exist in a slight degree, no time should be lost in placing the patient under the care of a medical man.

It very commonly happens, however, that both the symptoms of congestion, and those of actual inflammation, are accompanied by signs of great derangement of the digestive organs; such as a very foul tongue, an offensive breath, an unnatural state of the intestinal discharges, a tumid state of the abdomen, great tenderness in that part, on pressure being made, and a constant tendency in the child to pick his lips or finger-ends, or the bed-clothes. But these symptoms of abdominal derangement are not present where the disease occurs in healthy children from teething; nor in those cases of hydrocephalus where it arises from a blow, or from cold, or from any other common cause which is not connected with complaint of the digestive organs—that is, where the child had been previously in tolerably good health from having been properly fed and attended to. But as, perhaps in the majority of cases, a deranged state of the digestive organs is one of the most efficient predisposing causes of hydrocephalus, even when teething is the exciting cause of the disease, these symptoms of abdominal derangement, or rather of infantile remitting fever, are generally found to precede or accompany the former disease when it is present; especially, as, not only the infantile remitting fever not unfrequently degenerates into hydrocephalus, but the symptoms of the former are often superadded to those of hydrocephalus in the progress of that disease. The explanation of these latter circumstances is, that so great is the consent of action between the brain and the digestive organs, that, whilst a complaint in the latter, attended by fever, is exceedingly apt to induce or to be followed by a similar complaint in the former, so does an excited state of the former as frequently produce disorder of the digestive organs.

In fact, it is perhaps this close connexion between the brain and abdominal viscera, which constitutes the difficulty of detecting incipient hydrocephalus, and of deciding whether particular cases are merely instances of infantile remitting fever, or are cases of hydrocephalus.

It is needless, however, to enter further into these minutiæ in this place; but it is well to have pointed them out, because it shows how important it is to be particularly vigilant in attending to the first signs of disorder in children, as also for medical men to be unwearied in observing the symptoms of their diseases when present, least a fatal complaint may be on the eve of appearing, or be actually in existence, when the case is looked on as one of no importance.

It should be repeated, that children never make complaints, nor show signs of disorder, unless they are tired or hungry, or are actually ill; and therefore as they are, when in health, never tired, except on the approach of their hours of rest, nor so hungry as to be cross except at similar stated times, it may be confidently anticipated, that disease is not far distant, when even the slightest symptoms of disorder appear. A very healthy little girl, some weeks ago, while cutting her teeth, became a little cross and tiresome; she would, on no account, leave her nurse, nor could the nurse amuse her in the usual way; and she appeared in other respects dull and disordered. Her friends decided that it was nothing, or that the child only fretted after her little sister who had left her but a few days before. But they were told it was useless to deceive themselves, and that her crossness was disorder, which would terminate in disease unless it were dissipated; for that the child's tongue was white, and her irritability could not have been produced by the departure of her sister, as she had been in good spirits for the few days which immediately followed that circumstance.

But, although this view of the subject seemed to be the correct one, it was not necessary to use violent means for the relief of such a complaint.

The child had been partly weaned, and therefore it was only recommended that all food should be interdicted, except her nurse's milk, and that the child should be kept quiet and in a mild temperature. In a few days more, the symptoms of ill-health vanished, and the patient regained her spirits, although her sister did not return.

Thus it is, that even the slightest symptoms should be attended to; and it may be mentioned, that one of the commonest of these apparently trivial signs of incipient disease is, for a child to lean his head for a moment on his mother's knee, or to cease suddenly, and for an equally short time, from his accustomed occupations. Indeed, this symptom is closely connected with disorder of the brain; as probably so momentary, and therefore slight an affection of any other part, except the brain, would not produce so decided an effect on the child's sensations as to produce the symptom in question.

It is not intended to give a detailed account of hydrocephalus on the present occasion. Teething is so common an exciting cause of the disease, however, that it seemed a fair opportunity of giving some account of those signs of disorder which precede it on that and similar occasions. And, moreover, whilst it would be irrelevant to enlarge here on the symptoms of hydrocephalus, when actually present, it is not intended to discuss even the mode of treating these preliminary or promonitory symptoms.

It may be said, indeed, in conclusion, that low diet, purgatives, rest, and probably the warm bath, form the essence of the necessary treatment; and that, by the careful adoption of such remedies, joined to lancing the gums, as before mentioned, if necessary, disorders like these will, in general, terminate after the lapse of a few days.

ART. 3. *Medical Sentences.* No. V.

10.—The body is more certainly kept in health by avoiding the predisposing causes of diseases than by flying from their exciting causes. It is generally easy, or at least possible, to do the first; often impossible to accomplish the last.

11.—The proper quantity of food is always relative; never absolute. An invalid, while shooting on the moors of Scotland, will recover his health on a quantity of food which would destroy him in his chamber at home. Fresh air and exercise have surprising powers of strengthening a weakened stomach.

12.—The knowledge of children is very confined, but it is wonderfully accurate. A child observes with his whole soul; he is absorbed in his present sensations. Let it be recollected, that he as readily learns what is bad as what is good.

Art. 4. *On the Treatment of the Gout.*

Our ancestors considered it to be improper to interfere with the paroxysm of gout; and, indeed, it would appear, that Sydenham greatly contributed to the continuance of this most erroneous practice, by affording it the sanction of his high name—it was one of the few great practical mistakes which he made. He was misled by the old humoral pathology: "Nature," says he, "seems to have the prerogative to expel the peccant matter according to its own method, and throw it off from the joints, there to be carried off by insensible perspiration."

Nothing can be more erroneous than this view of the subject. The gout is a case of inflammatory fever. It differs indeed from other forms of inflammatory fever; inasmuch, as it arises from a peculiar set of causes, is seated in a peculiar part, and affects persons of a peculiar temperament: but still, it requires that the treatment shall be essentially antiphlogistic, and is as susceptible of cure as any other case of inflammatory fever is; although the peculiarities of cause, seat, and temperament, make it necessary that the treatment shall be varied so as to suit those peculiarities.

In making so decided an assertion as this, it is not only necessary to show that the gout can be cured, but that evil arises from allowing it to take its course uninterrupted by treatment. Many inflammations come under medical care, because they are situated in some of the vital organs, and are therefore destructive of life if not checked; but many others exist which will gradually wear themselves out as the gout does, and leave the patient well in the course of time. But in many of these latter cases, by permitting the inflammation to run its course uninterruptedly, it deranges the structure of the part, health does not perfectly return, and the patient either remains an invalid, or is cut off at an early period of his life by the progress of his insidious disorder. So it is with the gout. It does not indeed destroy life, except after a long course of suffering and reiterated attacks on the constitution; but, a very few unrestrained fits will often be sufficient to injure the general powers of the constitution, or to derange the organization of the parts which have been inflamed, so that the patient becomes an invalid, or is reduced to lameness, constant pain and affliction from a series of secondary evils with which gouty persons are but too well acquainted. On the contrary, if active measures be adopted during the paroxysms of the disease, not only is the disease cut short for the time, but it is prevented from hurting the general constitution, or impairing the integrity of the affected parts; so that such persons go on having fit after fit, and either reach that period of life when the system seems to be no longer pre-disposed to the disease, and when therefore the latter ceases to appear, or they put off the evil day, when the constitution must sink under the repeated attacks of so dire an enemy, until a much later period than would have been possible under other circumstances.

In discussing the treatment of the gout, it must be considered at various periods of the disease, and in different stages of its progress. For instance, the first fit of the gout in a young inflammatory subject, is very different from the gout when it appears for the twentieth time in a person whose limbs are crippled, and whose bodily powers are in a great degree worn out by the persevering attacks of the disease, and the erroneous habits of life by which those attacks had been produced. But a still further division of the subject is required. The gout, like all other diseases, is preceded in its attack by certain intelligible premonitory symptoms; and therefore, many of those persons who will not be taught to eradicate the disease altogether, may still be prudent enough to learn, how they may ward off a fit by attending to these premonitory symptoms, and relieving them by appropriate treatment.

In the present article then, we shall describe these premonitory symptoms, and deduce from our description the proper mode of treatment; whilst in our succeeding numbers, the treatment of the paroxysm itself, under various forms, will be taken up.

The premonitory symptoms of the gout will vary according to the state of the patient. If he be young and plethoric, they will be of a more inflammatory cast; if he be an older man—one who has suffered again and again at the hands of the gout, and whose digestive organs are debilitated, then these symptoms will more closely resemble those of common chronic dyspepsia.

The first attack of many persons, is often scarcely preceded by a percepticle state of ill-health: the patient becomes perhaps more corpulent, especially round the waist, his bowels are more costive than usual, his secretions generally are suppressed, and his bodily feelings desponding and uncomfortable. In this state, he is perhaps waked in the night with the symptoms of the disease on him.

If signs like these should occur on future occasions, and, if to them be joined a hot skin, a full quick pulse, and the usual symptoms of inflammatory action, then bleeding will be required, a full dose of calomel also, four or five grains perhaps, at bed-time, salts and senna in the morning, abstinence from animal food and stimulating drinks, and for some days afterwards a continued, but less rigid restriction of the diet, and a sufficient daily dose of salts and senna, or other mild opening medicine, to act gently on the bowels.

In many persons however, even before their earliest fits, more decided symptoms of general bodily derangement will be present, before the attack comes on; although, perhaps, the signs of inflammation may be less in degree, or almost altogether wanting. The stomach will be deranged and irritable, flatulence will be present, acidity, and consequently heartburn will be troublesome, the appetite will be irregular, and a tenderness, or feeling of coldness at the pit of the stomach will show itself. The head also will be affected; and sleepiness, yawning, depressed spirits, or nightmare, will form prominent symptoms; some fever will be present at night, the tongue will be white and dry, or yellow and dry; the secretion from the kidneys will be turbid and throw down a pink sediment, the sleep will be broken and unrefreshing, and in short the patient's state will be like that which marks the acute stage of dyspeptic complaints.

By applying the appropriate remedies for such symptoms as these, the impending fit of the gout may in general be put off. Bleeding may not perhaps be necessary; but, if the pit of the stomach be tender, six or eight or more leeches to that part will be useful, and the rest of the treatment recommended above will probably remove the complaint.

In other cases, the symptoms will be still less inflammatory, and then also some of the signs will be varied, or be replaced by others of an opposite cast. The tongue for instance, will be more coated and browner, and not so dry, the kidneys will perhaps secrete copiously a colourless fluid, the bowels may be affected by diarrhœa, the bodily strength also may be more reduced, and the spirits more depressed. In these cases, after the accustomed evacuations and low diet for a day or two, it may be necessary to uphold the general powers by prescribing the daily laxative in the form of rhubarb with any of the bitter medicines and ten grains of carbonate of potash or soda, and to change the low diet for animal food in small quantities taken without much vegetables, without pastry and indigestible puddings, and with not more than half the usual quantity of liquid, whether in the form of tea, water, or more potent liquor.

In many cases of gout, however, premonitory symptoms, like those above described, are almost always present in the constitution, the patient being very seldom free from either the paroxysm itself, or from that state of the digestive organs which leads to it. The discussion of these cases will fall more naturally under the head of chronic gout, than into our present subject.

It remains to say further, on this part of the subject, that most gouty people have their premonitory symptoms marked by something which is peculiar to themselves. In some, sickness is joined to the other evidences of a deranged state of the stomach, when it will be generally proper to begin the treatment by giving an emetic of ipecacuhanha—or a cough with expectoration will be present—or great affection of the nervous system, as agitation of mind or palpitations, internal tremors, or a disposition to shed tears. In other cases, affections of other parts will appear; the eyes will be inflamed, or the bladder will be irritable, or the symptoms of stricture will be present, or the patient will be deafer than ordinary. In many, the joints will tremble and be tender; there will also be numbness or spasmodic prickings of different parts, or an inability of motion, or swelled feet, with heat of the soles, and that dry state which accompanies a suppression of perspiration; or the perspiration generally will be increased with a swelling of the external veins.

Many other peculiar symptoms will be found enumerated in Dr. Scudamore's work on gout, from which excellent book several of the above are extracted. It will be seen, that these premonitory signs are all proofs that particular parts are in a state of irritation, if not of inflammation; and it is equally evident, that this disposition to inflammation, generated in the constitution by an indulgence in such habits as lead to the gout, affects those particular parts of the body, which, from an original or acquired weakness, are the most disposed to be irritated or inflamed, when the causes of irritation or of inflammation are present.

It is, indeed, from this connexion of the gout with so many peculiar forms of disease, and especially from its generally curing such diseases when the fit is formed, that the common opinion has arisen of the gout being a welcome guest, and that many persons hail a fit of the gout as they would their guardian angel.

Some of these persons are right; others, wrong: indeed the majority are wrong. It may be true, that the paroxysm relieves many symptoms of disorder in other parts, with which the patient is affected; but, in such cases, the new disorder is but a sorry substitute for the old one—the remedy is worse than the disease. In other cases, however, the gout does act beneficially by superceding symptoms, which, if permitted to go on, would probably lead to more dangerous diseases. In some cases, for instance, a fit of the gout has dissipated a violent inflammation of the lungs; in the great Morgagni's case it cured an inflammation of his eyes, for which he had tried the usual remedies in vain; Dr. Baillie mentions, that palpitation of the heart which had existed for six months without relief from medicine, instantly and entirely went away on the invasion of a paroxysm of gout. In this way, the gout may prevent the formation of the stone, or of dangerous affections of the head or liver, or other organs of vital importance to the constitution.

This subsidence of one disease on the appearance of another, has been called by authors, the conversion of diseases; and, it refers to several important principles in the human economy. First, it illustrates a fact, observed by Mr. Hunter, that two diseases cannot go on in the system at the same time. He remarked, that two dissimilar actions cannot be present at the same time, and that this often constitutes the cure of violent diseases. It is probable, for instance, that many women have been saved from an attack of a dangerous disease, or, if present, it has been robbed of its violence, by the state of pregnancy. In other cases the new action has the power of suspending an old one. So if a woman become pregnant when in a consumption, the disease will often be entirely suspended, and remain stationary until after delivery, when it will again make progress and cause death. In some cases the breaking out of a disease, the seeds of which have been imbibed, will be, in like manner, suspended. Two children were vaccinated on account of a child in the house having the small-pox. The cow-pox ran its course in great perfection; but many days after the declining of the cow-pox, the small-pox broke out in both children, ran its course in the regular way, perfectly uninfluenced by the previous cow-pox, and one of the children died. In this case, the children had first imbibed the small-pox infection; but, as about fourteen days elapse between that disease being taken and its appearance outwardly, the cow-pox had time to take possession as it were of the constitution, and the formation of the actual disease of small-pox was prevented from taking place. Immediately, however, after the cow-pox had ceased, the small-pox went on in its progress, and ran its course uninfluenced by the usual preventive effects of the cow-pox.

Secondly, this conversion of diseases illustrates our old position, that the causes or first origins of the majority of diseases are, in a great degree, similar. For, it could not take place unless the original causes of at least the two converted diseases were of a similar character; and when it appears, that if a person be so strongly predisposed to the gout, that the latter will supercede in his constitution so many diseases as have been alluded to above; or, in other words, when it appears, that the same causes which have predisposed so many individuals to be affected by different disorders leads each of them ultimately to have the gout, it becomes evident that the predisposing causes of these diseases are of a similar character.

Thirdly, it tends to prove another position; that when the principal predisposing causes have taken possession of the constitution, the consequent disease is given according to the temperament and other internal peculiarities of the person affected. So, an abundance of persons are affected by the primary disorders above mentioned, by dyspepsia in all its forms, and subsequently, probably consequently, by cough, or palpitation, by stricture or rheumatic pains and cramps, or by any of the other diseases of the head, chest, or abdomen, which are mentioned above, yet only such persons will have these complaints superceded by the gout, whose temperament is sanguineous with that admixture of irritability which is sufficiently enlarged on in a former article.

Before leaving this subject, it may be proper to explain the mode in which this conversion of diseases acts in saving patients perhaps from death. Let us take palpitation of the heart as an example. Many persons are affected by palpitations for many years without much injury arising in the constitution. But it is in this way that violent and ultimately fatal diseases of the heart are produced. A person becomes habitually dyspeptic ; by consent of action, the heart partakes of the irritability of the digestive organs ; it, in its turn, becomes irritable ; its actions become unnatural ; a continuance of improper action gradually leads to a change of structure of the heart ; the improper action becomes permanent, or, as it were, the natural action of the part, and thus the disease is established. It is well for such patients, when they are so predisposed to gout, as to have an incipient disease of the heart superceded by that more manageable complaint.

All this may be very true; we may have correctly pointed out how a fit of the gout, like an attack of other diseases, may be prevented by attending to and curing the premonitory symptoms—how the body is furnished with correcting influences, by means of which it may be, in many cases, saved from diseases which produce death by disorganizing the vital organs, bye-paths along which the causes of more dangerous complaints may be diverted from assailing the citadel of life—and yet, the fact still remains, that no person need have even these premonitory symptoms, nor bring into play these correcting influences unless they like. By avoiding the predisposing causes of such states of the constitution, by leading rational lives, that is, by apportioning the doses of food, and of air and exercise, according to the peculiar temperament of the individual, and his real wants; or, in other words, by acting on the plan of prevention, recommended in our last number, not only may the gout itself be prevented from occurring, but the premonitory symptoms themselves, as well as the numerous other diseases of which they often form a part, may be equally prevented.

ART. 5. *Confessions of an Opium-Eater.*

A VERY able article is given under this title, in the numbers of the London Magazine for September and October last; an article which is at once intensely interesting, replete with classical learning and philosophy, and written in the best style of English composition.

The writer describes the effects which taking very large doses of opium habitually, had on his constitution, the elysium in which he was wrapt during the early part of his career, and the tenfold Tartarean horrors which consumed him after it became necessary for him to make the dose excessive. But in reciting the causes which led to his melancholy propensity of eating opium, he enters into many details of his private history, which, whilst they must fascinate the ordinary reader by their wild and romantic character, are set down in language so vigorous and unexceptionable, and are so enriched by keen wit and admirable criticisms on the literature, both of books and of mankind, that they are equally calculated for readers of the highest class. The writer is indeed a scholar, a philosopher, and a gentleman.

We cannot, of course, enter into his private history; otherwise we should gladly enlarge on his early classical attainments, the boy-like impatience which made him run away from school, and thus plunge himself into greater difficulties than those which he meant to avoid, his romantic adventures in Wales and in London, as well as on the acute and varied criticisms on literature and manners with which his narrative abounds. It is sufficient to say, that during his sojourn in London, after running away from school at the age of seventeen, he was nearly reduced to a state of inanition by want of food; and, that hence, a painful disease of the stomach began, which tormented him for many years. In this way, probably, his health was impaired, but he began to eat opium from the following circumstance. In the year 1804, he waked, one morning, with excruciating rheumatic pains in his head and face, he having plunged his head into a basin of cold water during the night, for the toothach, and returned to bed with his hair wet. On the 21st day of this disease he took opium, and was in extasies. "In an hour," says he, "what a revulsion! That my pains had vanished was now a trifle in my eyes; this negative effect was swallowed up in the immensity of those positive effects which had opened before me—in the abyss of divine enjoyment thus suddenly revealed." This recurrence to his first introduction to opium, leads the author to describe, somewhat at large, the effects of opium on the human constitution. In the first place, he states, that the usual account given of these effects is an untrue one; but, as he only reasons on his own experience, the account may still be correct, and he only an exception to the general rule. He denies that opium ever intoxicates, or bears any analogy in its effects to alcohol. "Wine," he says, "disorders the mental faculties; it unsettles and clouds the judgement, and gives a preternatural brightness, a vivid exaltation, to the contempts and the admirations, the loves and the hatreds, of the drinker—opium, on the contrary, introduces the most exquisite order, legislation, and harmony. It communicates serenity and equipoise to all the faculties, active or passive: and, with respect to the temper and moral feelings in general, it gives simply that vital warmth which is approved by the judgment, and which would probably always accompany a bodily constitution of primeval or antideluvian health. The exhilarating effects of wine are transitory; they have a crisis and decline; "the pleasure from opium, when once generated, is stationary for eight or ten hours; the first, to borrow a technical distinction from medicine, is a state of acute—the second, of chronic pleasure." Wine produces a flame, opium a steady and equable glow. "In short, to sum up all in one word, a man who is inebriated, or tending to inebriation, is, and feels that he is, in a condition which calls up into supremacy the merely human, too often the brutal part of his nature; but the opium-eater (I speak of him who is not suffering from any disease, or other remote effects of opium) feels that the diviner part of his nature is paramount; that is, the moral affections are in a state of cloudless serenity, and, over all, is the great light of the majestic intellect."

The writer also denies both that "the elevation of spirits produced by opium is followed by a proportionate depression, and that the natural and even immediate consequence of opium is torpor and stagnation, animal or mental." "For ten years;" he says, "during which I took opium at intervals, the day succeeding that on which I allowed myself this luxury was always a day of unusual good-spirits." He proves, that the use of opium is not followed by immediate torpor, by stating, that he usually took his luxurious dose on a Saturday or a Tuesday night, that he might go to the opera and be entranced by the divine voice of Grassini; or, occasionally, on Saturdays, attend the markets, and enjoy the confused bustle of the scene on those evenings, by entering into the weekly marketings of the poor, their calculations, their distresses, and their anticipations of the next day's dinner.

Still, he goes on to say, "the theatre and the markets are not the appropriate haunts of the opium-eater, when in the divinest state incident to his enjoyment. In that state, crowds become an oppression to him; music even, too sensual and gross. He naturally seeks solitude and silence, as indispensable conditions of those trances or profoundest reveries which are the crown and consummation of what opium can do for human nature." "In his happiest state, the opium-eater cannot present himself in the character of L'Allegro; even then, he speaks and thinks as becomes Il Penseroso." It is his heaven to sit from sunset to sun-rise motionless, watching the ocean, and likening it, with its gentle undulations, to the world in its best state of repose.

Such, according to our author's experience, are the pleasures of opium; such, at least, are those which he experienced during ten happy years. From 1804 to 1812, for eight of these years, and the circumstance is important, he was in a state of uninterrupted health (would claret or Madeira, he asks, have been as little injurious). In 1812, however, he had a severe illness; "a most appalling irritation of the stomach," he says, "in all respects the same as that which had caused me so much suffering in my youth, and accompanied by a revival of all the old dreams." He now began to take opium daily, and became "a regular and confirmed opium-eater, of whom to ask whether he had or had not taken opium, would be to ask whether the lungs had performed respiration, or the heart fulfilled its functions." It would seem that the three succeeding years were years of gloom and cloudy melancholy; but at this time he "descended suddenly, and without any considerable effort, from 320 grains of opium (or 8000 drops of laudanum, 25 to the grain) per day to 40 grains, or one-eight part." "Now then," says he, "I was again happy: I now took only 1000 drops of laudanum per day: and what was that? A latter spring had come to close up the season of youth: my brain performed its functions as healthily as ever before: I read Kant again; and I again understood him, or fancied that I did. Again my feelings of pleasure expanded themselves to all round me, &c." Our author now spent a year of unmixed happiness, although he took opium daily; an intercalary year, as he calls it, the preceding and succeeding years forming periods of great suffering.

In the year 1817 his miseries began. He tried to reduce his dose of poison, but in vain; for, he says, that a point always arrives in such an attempt when "further reduction causes intense suffering." "There is nothing like low spirits; on the contrary, the mere animal spirits are uncommonly raised; the pulse is improved, the health is better. It is not there that the suffering lies. It has no resemblance to the sufferings caused by renouncing wine (how does he know that?)—it is a state of unutterable irritation of stomach, accompanied by intense perspirations, and feelings, such as I shall not attempt to describe without more space at my command."

Studies were now at an end; books became hateful, or the mind shrunk from them with a dreadful sense of powerless and infantine feebleness: it lapsed into imbecillity. Mr. Ricardo's work on Political Economy alone, in 1819, recalled his fleeting powers, and so roused him by the profound understanding which it displayed, as to engage him in writing some "Prolegomena" on the same subject; but the mental powers again sunk under their oppressing load.

Hence then, opium produces incapacity and mental feebleness; and the writer goes on to describe, how this "intellectual torpor" is made more terrible, by the victim losing "none of his moral sensibilities or aspirations. He wishes and longs, as earnestly as ever, to realize what he believes possible, and feels to be exacted by duty; but he lies under the weight of incubus and nightmare, and curses the spells which chain him down from motion."

Our author's most dreadful torments, however, arose from the apparitions of his dreams, which haunted him as well whilst awake, as when sleeping. "At night, when I lay in bed, vast processions passed along in mournful pomp; friezes of never ending stories, that to my feelings were as sad and solemn, as if they were stories drawn from times before Œdipus, or Priam—before Tyre—before Memphis." Then, "a theatre seemed suddenly opened and lighted up within my brain, which presented nightly spectacles of more than earthly splendour."

With respect to these creations of the fancy, it seems; 1st, that they generally personified the unhappy patient's thoughts; and hence he feared to think: "for, as Midas turned all things to gold, that yet baffled his hopes, and defrauded his human desires, so whatsoever things, capable of being visually represented, I did but think of in the darkness, immediately shaped themselves into phantoms of the eye, and were drawn out by the fierce chemistry of my dreams, into insufferable splendour that fretted my heart." 2nd. They were attended by a deep-seated suicidal gloom, which is incommunicable by words. "I seemed," says he, "every night to descend, not metaphorically, but literally to descend, into chasms and sunless abysses, depths below depths, from which it seemed hopeless that I could ever re-ascend." 3rd. "The sense of space; and in the end, the sense of time, were both powerfully affected. Buildings, landscapes, &c. were exhibited in proportions so vast, as the bodily eye is not fitted to receive. Space swelled, and was amplified to an extent of unutterable infinity. This, however, did not disturb me so much as the vast expansion of time: I sometimes seemed to have lived for 70 or 100 years in one night; nay, sometimes had feelings representative of a millenium passed in that time, or however, of a duration far beyond the limits of any human experience." 4th. "The minutest incidents of childhood, or forgotten scenes of later years, were often revived." These were not recollected; for when awake, they would not have been acknowledged as parts of past existence: they appeared like intuitions, and were instantly recognised.

Many examples are given of these forms of dreams. At one time the sufferer's creations referred to architectural scenes of endless magnificence; then to the personification of particular historical details; then to fantasies on lakes and seas; and then, what he calls "the tyranny of the human face began to unfold itself." "Now it was, that, upon the rocking waters of the ocean, the human face began to appear: the sea appeared paved with innumerable faces, up-turned to the heavens; faces imploring, wrathful, despairing, surged upwards by thousands, by myriads, by generations, by centuries. My agitation was infinite—my mind tossed and surged with the ocean."

During part of the year 1818, the scene of his imagery was transported to the Eastern hemisphere. "I was stared at," he says, "hooted at, grinned at, chattered at, by monkeys, by parroquets, by cockatoos. I ran into pagodas, and was fixed for centuries at the summit or in secret rooms; I was the idol; I was the priest; I was worshipped; I was sacrificed. I fled from the wrath of Brama through all the forests of Asia; Vishnu hated me, Seeva laid wait for me. I came suddenly on Isis and Osiris: I had done a deed, they said, which the ibis and the crocodile trembled at. I was buried for a thousand years in stone coffins, with mummies and sphynxes, in narrow chambers, at the heart of eternal pyramids. I was kissed, with cancerous kisses, by crocodiles; and was laid, confounded, with all unutterable slimy things, amongst reeds and Nilotic mud.' It was only in these oriental dreams that "any circumstances of physical horror entered. All before had been moral and spiritual terrors; but here the main agents were ugly birds, or snakes, or crocodiles, especially the last." This must have been sufficiently terrible: but the description is wound up by a fine and touching circumstance. He was often awakened from these dreams by his children standing hand-in-hand by his bedside, to shew their coloured shoes or new frocks, or to let him see them dressed for going out. "I protest," he says, "that so awful was the transition from the damned crocodile to the sight of innocent *human* faces, and of infancy, that, in the mighty and sudden revulsion of mind, I wept, and could not forbear it, as I kissed their faces."

These reveries lasted till 1820, and it is probable that the daily dose of opium during this period was from 50 to 150 grains; but at this time, as it appeared that a continuance of the habit would soon destroy life, an effort was made to break it, although it seemed probable that life would be equally lost in the attempt. Our author succeeded, a few months ago, in reducing his dose to twelve grains a-day, and his healthful feelings have in a great measure returned.

These confessions are very interesting. The details seem like madness, but it is not a case of madness. The mind was aware that its creations were baseless; but its faculties were overwhelmed by the deranged state of the bodily organs with which they are inseparably connected. In this view of the matter, and on other accounts also, the case, as a medical history, is defective. We, of the medical profession, would be glad to be told some particulars respecting the bodily health during various parts of this long period of seventeen years—yes, even of its present state: the appearance of the tongue, the colour of the skin, the state of the appetite, of the pulse, and of the excretions, whether fever was present at night during these terrible visitations, &c For, medical men know, that indigestion will cause all the evils here set down, at least in a minor degree. A lady, the other day, after eating pork, became delirious, and for a time nearly insensible to surrounding objects. An emetic relieved her of these symptoms; but, in the evening, when she put out the candle for the night, and had shut her eyes, a procession of ten thousand figures appeared before her, each arrayed in its appropriate costume, and each having distinct features and attributes. These forms haunted her for a considerable time, when they vanished; and an immense garden succeeded, studded with innumerable and very-varied flowers; and scenes, similar to these, alternated with each other, until she fell asleep, and waked on the next morning well.

We ourselves can also remember, when, during the period of our closest studies, the stomach has become deranged, and the brain, from over-excitement, has transmitted erroneous impressions to the senses: the room has appeared to be unsteady, the head has in some degree swum, and every thing, on which the hand has been laid, has appeared to be many times more than its natural size. Relaxation or rest cured this state of nervous irritation; but it is on this part of the subject that our opium-eater's case is very valuable. It is not difficult to believe, that the external senses may become morbid in their action; but this case is the only one which describes a similar morbid condition of such an internal sense as the feeling of time. Days became centuries in the patient's estimation. And yet, on consideration, this is not more extraordinary than that the idea of space should be so much modified: for the idea of time is only a more indirect result of the action of our external senses, than the common instances of sensation are; it would seem to arise from the combined and continued operation of several of them.

We have heard many other particulars respecting the gentleman who has written these extraordinary confessions, all tending to prove that he is a man of great talent and acquirements; but it only remains to be remarked here, that, from his own account, he has not entirely ceased to take opium, and also, that his morbid feelings still exist in some degree. Probably his health is still somewhat deranged; and therefore, he should know, that by leaving off his poison entirely, and by taking the necessary means of re-establishing his general health, and obviating the state of body which immediately results from the want of its accustomed stimulus, he may speedily and entirely regain his ancient integrity of constitution. He remarks, that ammoniated tincture of valerian was the only medicine which gave him any relief whilst he was leaving off his opium. A friend mentioned to us, the other day, that he had found the colchicum antumnale of singular utility in obviating the effects of an over dose of opium.

ART. 6. *Medical Sentences.* No. VI.

13.—Cold strengthens the young; but it destroys those who are old.

14.—Rousseau said, that the plays of children are as their most serious occupations.

ART. 7. *Review of Dr. Reid's Essays on Hypochondriasis, concluded from page* 246.

THE author next takes up the subject of *Lunatic Asylums,* and he justly reprobates the mode in which these receptacles were formerly conducted. Where cruelty, neglect, and ignorance, held their sway, it was not extraordinary that, to immure a madman in a lunatic asylum, was to fix and perpetuate his madness. Well may Dr. R. call them "nurseries for and manufactories of madness;" but it is gratifying to think, that the stigma no longer fixes itself on our lunatic asylums. Both public and private institutions are now conducted on different principles. The greatest improvements, too, have been made in the mode of treating insanity; and, as in many cases, a cure can only be accomplished by the patient's actions being under the most perfect controul, a temporary residence in such an asylum is often essential to the well-doing of our patients. Hence, then, it is perhaps wrong to speak too strongly against the use of lunatic asylums.

We now enter more particularly on the practical part of Dr. R.'s essays. *The importance of counteracting the tendency to mental disease* forms the subject of the 21st essay, and it is indeed important. Insanity never comes on at once; the first aberrations of the mind are so slight as to be disregarded; "the coming on of melancholy, like that of the evening darkness, is scarcely perceptible in its encroachments." Indeed, as Dr. R. says further, "almost every nervous affection may be considered as an approach to insanity." Many madmen walk abroad long after their disease has formed: and thus, when its existence is not suspected, it is permitted to run on and become incurable; whilst, if it had been detected earlier, a cure would have been easily accomplished. In those who are predisposed to insanity, the slightest abberration of the mind should be attended to.

The efficacy of *bleeding* in insanity is discussed in the 22d Essay; but the general reader will be taught but little by the observations which it contains. The too free use of the lancet is condemned in perhaps rather too indefinite terms; for, as no clue is given by which the proper cases for bleeding may be selected, and as the lancet is condemned in a similar vague way as applicable to many other diseases, such as the head-disorders of elderly people, in which it is often as the sheet-anchor, much unintentional injury may be done, if such observations be perused by unprofessional readers.

The next Essay is headed *Pharmacy,* and it consists of general observations on the rules to be adopted in prescribing medicine. It has but little connexion with the subject of the work.

Ablution. Personal cleanliness, says our author, should be added to the list of the cardinal virtues; for, not only does it tend greatly to preserve the health of the body, but it is not inefficacious in producing delicacy of mind. A copious use, however, of cold water, as in the form of the cold bath, is condemned, at least in the case of weakly persons. Nevertheless, says Dr. R. "the washing of those parts which are usually covered, is perhaps more necessary to health and comfort than of those which are exposed to the external air, a circumstance, which by favouring the tendency to evaporation, tends to prevent the accumulation upon the surface of that secreted matter, which, when allowed to remain there, is apt to produce, in addition to a state of uncomfortable languor, febrile, and a variety of cutaneous diseases."

The following paragraph will be useful in the treatment of other cases than those of insanity:

"The warm bath has a remarkable influence in composing the mind when in that state of violent irritation, which often leads to the use of laudanum or some equally deleterious opiate. This remedy has been, for many years, considered, at the Retreat at York, as of greater efficacy, in certain cases of insanity, than all the other medical means which have been employed. There is no agent, which, equally with the tepid bath, is calculated to promote the general tranquillity of the constitution. It will often induce sleep when the more direct and accustomed opiates fail, and, with all its beneficial tendencies, it is followed by none of those evil effects, which are apt to arise from the drugs more generally employed to allay uneasiness, to restore composure, and to conquer the obstinacy of an involuntary and unnatural vigilance. The notion that the warm bath is relaxing may, in a great measure, be derived from the effect which it is observed to produce on inanimate matter: as if the nerves and muscles of the human frame were like the strings of a musical instrument. The warm bath is, in many cases, a congenial and salutary cordial; it animates torpor and elevates depression; on which account, when intemperately employed, or in cases where there is already a too vigorous excitement, there is a chance of its proving deleterious." "To the mansions of the wealthy," Dr. R. goes on, "a bath ought to be considered as an indispensable appendage: and if institutions for the corporeal purification of the lower classes of society were generally established, such a measure could not fail to produce an incalculable diminution of disease, and would thus supersede, to a certain degree, the more expensive necessity of hospitals, and that of all the other medical asylums for popular relief and refuge."

Bodily Exercise. "There is not any means better adapted than bodily exercise for the cure as well as prevention, more particularly of what are called nervous diseases. One of the best moderators of too acute feeling is labour carried to fatigue. A man suffering under a fit of the vapours, will often find that he is able to walk it off. He can be exonerated from the load upon his mind by the violent or continued agitation of his body. I knew a delicate and nervous lady, who, to counteract the influence of domestic vexation, often used to walk ten miles and back again."

Improvements in the mechanism of modern carriages, by which they are made easy, and the increase of their use amongst almost all classes, are said, by Dr. R., to "have contributed to the encreased prevalence of those maladies which originate in a great degree from an indulgence in lassitude and languor." On the contrary, says Dr. R. "driving a spirited and somewhat unruly horse, in a gig, although attended with a certain degree of peril to life and limb, I have more than once prescribed in cases of hypochondriasis, as not only requiring bodily exertion, but as being calculated actively to engage the attention." Walking is the best exercise for those who are in health; but horse exercise is preferable for those whose constitution is languid and obstructed. "Sydenham had such confidence in it, that he considered it as an absolute specific for consumption, and in one of his medical treatises observes, that if any man were possessed of a remedy, that would do equal service to the human constitution with riding on horseback twice a-day, he would be in possession of the philosopher's stone." "Broken-up spirits" are cured by, as it were, "living on horse-back."

It is the labour of the sportsman, that enables him to bear with impunity high living and intemperance. "The follower of the hounds is on the road to health, and if it were not for the excesses which are too frequently connected with his mode of life, it might prove singularly conducive to vigour and longevity."

Inaction produces a multitude of ailments.

Even the lameness of those who have suffered much from the gout, is fairly chargeable on want of exercise after the fits.

Even posture has much influence on the health. "Standing, as it implies muscular exertion, may be regarded as a species of exercise. A valuable treatise might be written on what may be called the diseases of the desk." The teachers at the majority of schools for females, are reprehended for want of attention to this particular.

Occupation is the twin brother of bodily exercise. Even an anxious business is better than no occupation. The variety of objects which attract persons who are engaged in business, and the expectation of something valuable in prospect to which it leads, have each much influence in preserving the health. Thus, wealth frequently leads to hypochondriasism, because it eases its possessor of the cares of life; and hence the toil of acquiring opulence, often brings more happiness than the leisure which that opulence enables its future possessors to indulge in. "Leisure, indeed, is frequently the cause, although not often the subject of our complaints." "We are told by M. Pinel, that there is a lunatic hospital in Spain, where the poorer classes are made to work, and are generally cured; whilst the grandee, who is not compelled to labour, is generally incurable."

Every kind of occupation then, is good for the hypochondriac. If he be literary, he may write novels as well as read them; whilst, in the case of females, the ordinary employments of the needle, will often be found to "draw off, as it were, the superfluous and oppressive sensibility of the mind." "A needle and thread are a small artillery, which can often repel the force of the mightiest passion." Occupation produces a controul over the attention, and it was the possession of this property of abstraction, which, in the opinion of Sir Isaac Newton, constituted his own superiority over those who surrounded him. The exercise of this controul too, is so alluring as well as advantageous, that both Gibbon and Johnson were grieved, when they had completed the great literary labours of their lives. At no period is a continued occupation more to be desired, than at times of heavy calamity.

Salutary, however, as occupation is in cases of disordered health, it is often very difficult to entice the patient to engage in it. When this happens, artifice may often do what persuasion will not effect. Order a sluggard to lie in bed, and he will probably be anxious to get up. "Give the most favourite delicacy as a medicine, and it will no longer be palatable."

One species of occupation indeed is detrimental, and that is the great attention which hypochondriacs often pay to their own feelings and symptoms. Hence a valetudinarian should be taught how to forget himself, by being occupied in assisting others. The practice of benevolence forms one of the best kinds of occupation.

In this way then, occupation is better than exercise. He who takes exercise for the sake of his health, will do himself less good than if he takes the exercise in the way of business. In the same way, food will disagree if it be taken as medicine, with reference to the termination of a disease; at least so says Dr. R.

Dr. R's concluding Essay, the 27th, shows that *real evils* are often *a remedy for those of the imagination.* An hypochondriacal lady was affected by a fatal, though chronic complaint: her hypochondriasis immediately vanished. "The near prospect of death, instead of overpowering, seemed to brace anew the relaxed energies of her frame; and what is well worthy of remark, so far from being, during her subsequent days, selfishly absorbed by her real, as she had been before by her imaginary ailments, she interested herself almost continually and exclusively about the happiness of others; and in proportion as she became more amiable, found herself less wretched." Dr. R's explanation of this, is, that a man must first know adversity before he can become truly benevolent; "the mind must be wounded before it can give out the balm of human kindness."

We have given a full analysis of Dr. Reid's publication. Several years ago, Dr. R. gained considerable and deserved celebrity, by the reports of diseases which he drew up for the Monthly Magazine. The philanthropy and elegance of style which these essays displayed, were highly relished by very many readers; and indeed, his present work has, for the same reasons, attracted much public attention, the second edition having been long ago called for. But, after all, it is not perfect. The language in which it is written, although it is often at once poetical, and so condensed as to form even a series of axioms, is not unfrequently hyper-elegant; or, in other words, it degenerates into the language of bad taste, if not into ungrammatical, and even unintelligible sentences—the practical part of the volume is very deficient—not only is little or nothing precise said, on the application of remedies in the manifold forms of insanity, but those signs of bodily derangement, or ill health, which are so various in kind, and are so universally attendant on every form of mental derangement, and the knowledge too of which is so essential in combating the disease, are scarcely hinted at—nay, the great subject of prevention, which is muchmore important even than the treatment of insanity when present, especially in a popular work, is left almost wholly without discussion.

These are heavy faults; especially when they appertain to one who has so much power to prevent their occurrence. His plan of enumerating the various causes of insanity, and then, of detailing under each head the forms of insanity by which they are followed, is at once excellent in itself, and interesting to the reader; but to make it complete, the bodily ailments which accompany or precede each form of the disease, should be pointed out—the mode in which the peculiarity of cause, engrafts the mental disorder on the bodily ailments, should be described—and lastly, an ample deduction should be made from these premises, showing how the bodily actions are to be regulated, so as to keep the body in health, and the mental powers disciplined, so as to ensure the "mens sena in corpore sano."

Such a work would be indeed a valuable present to unprofessional readers; and, it is to be hoped, that Dr. Reid, who has executed one part of the plan so well, will, on another occasion, complete the design in an equally excellent manner.

END OF VOL. II.

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Dr. Armstrong will shortly publish A General View of the Nature and Treatment of Acute and Chronic Diseases. In this work, Dr. Armstrong will show, from facts which he has collected since his residence in London, that what is called Mal Aria, or Marsh Effluvium, is the primary source of Typhus Fever, and that this disease has three types, viz. the intermittent, the remittent, and the continued form, which pass and repass into each other, according to circumstances which will be pointed out. The question respecting the contagious, or non-contagious nature of Typhus will be discussed, through a strict reference to facts. In this work also, Dr. Armstrong will develope an extensive intercourse between the stomach and heart, and this intercourse will be pathologically and practically applied to chronic diseases in particular. Dr. Armstrong will, at the same time, adduce a body of evidence, to show the great efficacy of full doses of opium immediately after venesection in acute inflammation of the bowels, and some other inflammatory affections.